



August 16, 2013

Ms. Kimberly Tisa  
PCB Coordinator  
U.S. Environmental Protection Agency Region 1  
5 Post Office Square – Suite 100  
Boston, Massachusetts 02109-3912

**RE: PCB Remediation Plan under 40 CFR 761.61(a) and (c)**  
**Cambridge Trust Company**  
**1350 Massachusetts Avenue, Cambridge, Massachusetts**

Dear Ms. Tisa:

On behalf of the President and Fellows of Harvard College (Harvard), this PCB Remediation Plan has been prepared for the proposed remediation of polychlorinated biphenyls (PCBs) in window/door sealants at select exterior doorway locations associated with discrete tenant space improvements in the basement and ground floor levels of the Cambridge Trust Company (CTC), located within the Holyoke Center building at 1350 Massachusetts Avenue in Cambridge, Massachusetts.

This plan details the proposed remedial approach for the removal and off-site disposal of PCB bulk product waste (caulking) and PCB impacted building materials, and a proposed 40 CFR 761.61(a) and (c) approach for verification and remediation of adjacent building materials scheduled to remain in place and which cannot be removed for architectural and/or structural reasons.

The key components of the remedial approach include complete removal of PCB-containing caulking as well as the window or door frames that are “coated” or in direct contact with the caulking. Masonry surfaces in direct contact with the caulking may be subject to limited removals if removal is feasible from a structural and architectural standpoint. Following limited removals, verification sampling of the masonry will be conducted to determine whether materials remaining in place meet cleanup levels. If cleanup levels are not met, then an in-place management approach will be implemented (i.e., application of a liquid encapsulant and/or physical barrier). All PCB-containing materials removed from the building will be transported for off-site disposal at an out-of-state hazardous waste landfill permitted to accept this type of waste.

Additional details regarding the proposed scope of work and materials management approach are provided below.

### **Background**

The Cambridge Trust Company, which is the subject of this plan, leases space as a commercial bank occupying the northeast corner of the lower level (basement), the ground level (first floor), and the second floor of the Holyoke Center. Holyoke Center is a concrete masonry building originally constructed between 1961 and 1966, and is used as the main administration building for the University. The lower floors of the building are primarily used for mixed office and retail space. Three distinct doorways/windows on the basement and ground floor levels of the building are being removed and replaced in association with planned renovations at the Bank and are the subject of this plan submittal. These areas are identified as:

- Area 1 – South Façade Lower Level Sidelight Windows
- Area 2 – West Façade Ground Level ATM Windows
- Area 3 – West Façade Ground Level Door and Sidelight Windows



## Source Material Characterization

During the planning phases of the project, Woodard & Curran visually surveyed and sampled representative caulking and sealants observed at the basement and ground floor windows and doors scheduled for removal within Area 1, Area 2, and Area 3. Thirteen different types of caulking or sealants were observed and sampled for PCB analysis from these areas. The location of each Area and the sample locations are shown on Figure 1A (lower level) and Figure 1B (ground level). Samples were transported to Analytics Environmental Laboratory under standard chain of custody procedures, extracted using USEPA Method 3540C (Soxhlet) and analyzed for PCBs by USEPA Method 8082. A summary of the sample results is presented on Table 1 and the laboratory analytical reports are provided in Attachment 1.

The characterization data obtained from each of these three areas is presented below. In summary, several different types of caulking and glazing sealants were found to contain PCBs  $\geq 50$  ppm at all three areas.

### Area 1 – South Façade Lower Level Sidelight Windows

Perimeter Caulking: Type 1 (approx. 36 l.f.) – Interior and exterior vertical metal sidelight window frame to concrete joints (not observed at upper horizontal joint).

- PCBs: 54,800 (interior) and 70,100 ppm (exterior)
- Asbestos: No

Perimeter Caulking: Type 2 (approx. 10 l.f.) – Observed at lower horizontal exterior metal window and door frame to brick paver joint (not at interior joint). No caulking present at concrete façade to brick joint perpendicular to the door.

- PCBs: 116 ppm
- Asbestos: No

Glazing Sealant: Type 3 glazing – Upper sidelight window frame to glass pane joints.

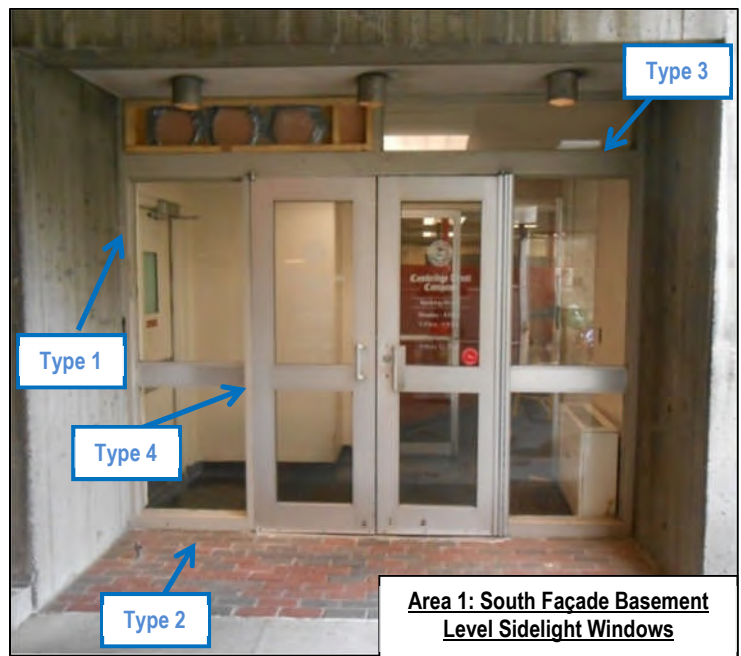
- PCBs: 4,780 ppm
- Asbestos: 2% Chrysotile

Glazing Sealant: Type 4 glazing – Vertical sidelight window frame to glass pane joints and metal door leaves to glass pane joints.

- PCBs: 31.2 ppm
- Asbestos: No

Quantities: Four windows and two doors

- Type 1 caulking: 36 l.f. (two interior and two exterior vertical joint)
- Type 2 caulking: 10 l.f. (one exterior lower horizontal joint)
- Type 3 glazing: 24 l.f. (interior and exterior; one glass pane was removed during asbestos abatement work to allow for the HEPA exhaust to pass to the exterior. This removed window pane was managed for off-site disposal as  $\geq 50$  ppm PCBs and ACM waste.)
- Type 4 glazing: 84 l.f. (interior and exterior)

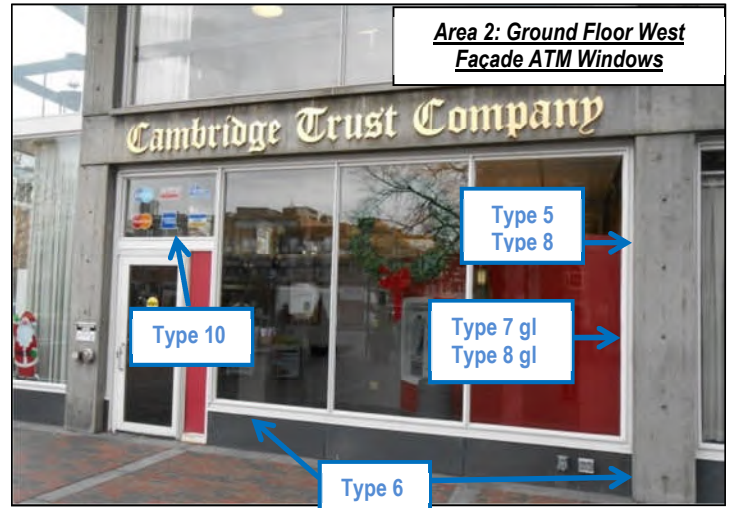




## Area 2 – West Façade Ground Level ATM Windows

### Perimeter Caulking:

- Type 5 caulking – **exterior** metal window frame to concrete joints.
  - PCBs: 67,000 ppm
  - Asbestos: No
- Type 6 caulking – **exterior** slate panel to concrete column, slate panel to granite slab, and slate panel to horizontal window frame joints.
  - PCBs: 58 and 71.4 ppm
  - Asbestos: No
- Type 8 – **interior** metal window frame to drywall joint.
  - PCBs: 40.8 ppm
  - Asbestos: No
- Type 10 – **interior** metal door frame to metal I-beam joint.
  - PCBs: 38.6 ppm
  - Asbestos: No
- Types 11 and 12 metal frames to metal panels on exterior windows (7.95 and 10.1 ppm)



### Glazing Sealant:

- Type 7 - **exterior** glazing sealant – 8.56 ppm PCBs; Asbestos: No
- Type 8 - **interior** glazing sealant – Interior metal sidelight window frame to glass pane joints. PCBs: 40.8 and 262 ppm and Asbestos: No

### Quantities: Four windows and one door

- Type 5 caulking: 37.5 l.f. (two vertical joints + one horizontal joint)
- Type 6 caulking: 3 l.f. slate to concrete, 14 l.f. slate to granite, 14 l.f. slate to metal
- Type 8 interior caulking: 11 l.f.
- Type 10 caulking: 4 l.f.
- Type 7 glazing: 100 l.f.
- Type 8 glazing: 100 l.f.



### Area 3 – West Façade Ground Level Door and Sidelight Windows

Perimeter Caulking: **Exterior** joints (concrete and slate) – Similar to above caulking Types 5 and 6 (PCBs 67,000 ppm and 58/71 ppm, respectively); not asbestos; unknown along interior side of exterior windows due to panels

Glazing Sealants: Exterior Assembly – outside (exterior) face is similar to above (Type 7 with 8.6 ppm PCBs and non-ACM); inside (interior) face is Type 8 glazing (262 ppm PCBs)

Quantity: Three windows and two doors

- Type 5 caulking: 40 l.f.
- Type 6 caulking: 15 l.f. slate to metal, 15 l.f. slate to granite, 3 l.f. slate to concrete
- Type 7 glazing: 66 l.f.
- Type 8 glazing: 66 l.f.

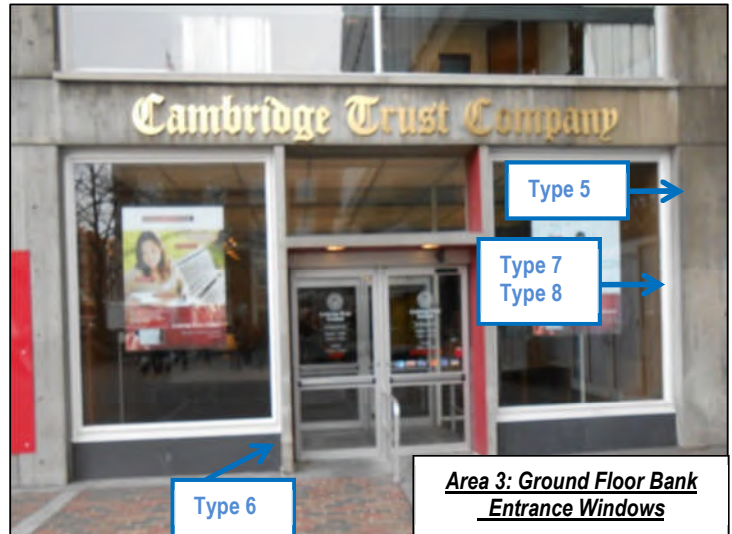
Perimeter Caulking: **Interior** window and door unit- Unknown along northern vertical joint due to panels, not observed along upper and lower horizontal and southern vertical joints.

Glazing Sealants: Interior Unit –

- Type 9 glazing – metal window frame to glass pane joints on both sides of panes: PCBs - 267 ppm and Asbestos – No
- Type 13 sealant on metal to metal components: PCBs – 26.5 ppm and no asbestos

Quantity: Three sidelight windows

- Type 9 glazing: 172 l.f.

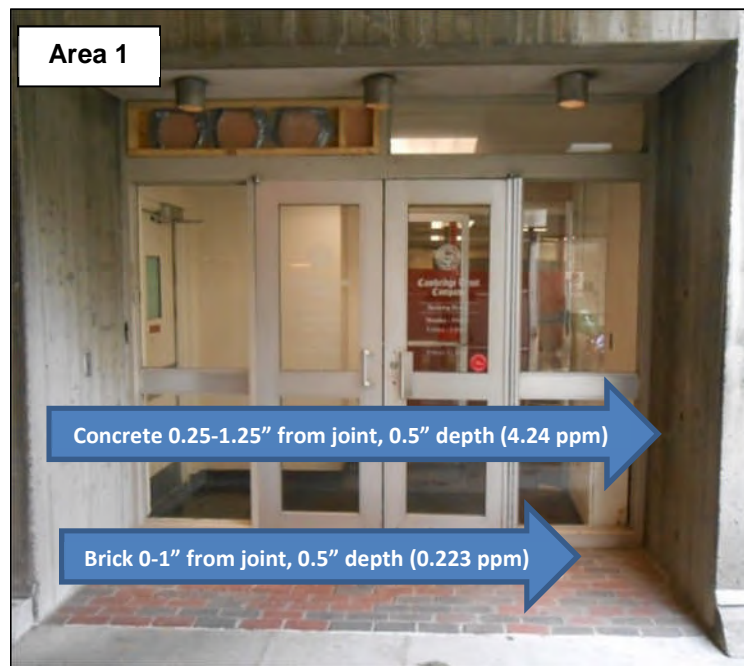






## Adjacent Material Characterization Data

Certain building materials located in direct contact or coated with PCB  $\geq 50$  ppm caulking at Areas 1, 2, and 3 are scheduled to remain in place as part of the renovation project. This includes concrete and brick masonry at Area 1, and concrete masonry (façade) and granite (ground surface) at Areas 2 and 3. To determine the extent of potential PCB impacts to these adjacent materials, a total of five samples were collected during a pilot test activity. The pilot test emulated the potential remedial method of caulking removal followed by surficial grinding of the direct contact areas and then collection of verification samples. Samples were collected in accordance with the EPA Region I Standard Operating Procedure for Sampling Porous Surfaces for PCBs (Revision 4, May 2011). Samples were transported to Alpha Analytical Laboratory under standard chain of custody procedures, extracted using USEPA Method 3540C (Soxhlet) and analyzed for PCBs by USEPA Method 8082. A summary of the sample results is provided on Table 2, and the laboratory analytical reports are provided in Attachment 1. Photos depicting the sample locations and PCB results are presented below. In summary, PCBs were detected at concentrations ranging from 4.29 to 19.0 ppm in the concrete samples, 0.223 in the brick sample, and 0.190 in the granite sample. These results are consistent with those anticipated as higher PCB concentrations were detected in the more porous materials, which were also adjacent to the higher source concentrations.





## Remediation Plan

As part of the proposed renovation activities, each of the doors and associated windows in the three areas described above are being removed and replaced with new doors and associated window systems. Following removal of the window/door components and prior to installation of the new windows/doors, adjacent building materials will also be remediated, as needed. A summary of the proposed remediation for the source material (caulking) and adjacent building materials and components is provided in Table 3. A more detailed description of the proposed activities is provided in the following paragraphs.

The work will be performed by a remediation contractor trained in the abatement of asbestos and PCB-containing materials. Prior to performing the work, the contractor will prepare a health & safety plan (HASP) specific to the work activities. At a minimum, this health & safety plan will specify that all workers are to comply with applicable Federal and State regulations regarding the work activities, including but not limited to OSHA regulations, respiratory protection, and the use of appropriate personal protective equipment (PPE).

The contractor will also prepare a brief work plan detailing the proposed means and methods for performing the work, including proposed site setup and engineering controls, proposed tools and techniques to be used for each activity, sequence of work, equipment and waste storage locations / staging areas, and a proposed disposal facility. To reduce particulate levels and exposures to airborne particulates, a combination of engineering controls (e.g., work zone enclosures, wetting, etc.) and PPE will be implemented as part of the work activities. Access to the active work areas will be controlled by the contractor through plywood enclosures (for security reasons), fencing, posting of signs, or other equivalent means. Given the building use and security provisions, time is of the essence between window/door removal and replacement.

### Removals and Verification

Caulking, glazing sealant, and associated window/door frames from Area 1, Area 2, and Area 3 will be managed collectively as  $\geq 50$  ppm PCB bulk product waste with disposal to a hazardous waste landfill. The slate cladding panels present on the façade beneath the windows at Areas 2 and 3 on the west façade ground level will also be managed with the caulking and window/door components as  $\geq 50$  ppm PCB bulk product waste. The  $\geq 50$  ppm wastes identified above and any other “coated” bulk materials removed during the work will be managed collectively as a single waste stream. Certain materials have also been confirmed asbestos-containing materials (ACM) and will be disposed as ACM, as well. Given the nature of the work (the entire doors and windows are being removed), the sealants identified with PCBs  $< 50$  ppm will be managed collectively for off-site disposal with the  $\geq 50$  ppm PCB sealants (i.e., all sealants and associated window/door components will be removed and disposed of as a  $\geq 50$  ppm PCB waste). This includes all caulking and glazing sealants identified within the project work areas as identified on Table 1.

Certain building materials in direct contact with PCB  $\geq 50$  ppm caulking at Areas 1, 2, and 3 are scheduled to remain in place, including brick masonry at Area 1, granite at Areas 2 and 3, and concrete masonry at all three areas. The proposed remediation approach for these materials includes a limited bulk removal approach (i.e., surficial grinding) with a contingency for in-place management (encapsulation) if target cleanup levels cannot be achieved within tolerable limits of material removal. Larger-scale bulk removal of these materials is not considered to be a feasible option given architectural and structural concerns, including:

- Structural and weatherproofing concerns would not allow concrete cuts/removal from these areas (e.g., removal of concrete from the joints would result in joints too large to continue to function in their current design).
- The particular type of bricks (hand-cut) and granite used in the building construction are unique materials that would be difficult to replace in-kind.
- The building was designed by Josep Luis Sert. Given the building’s architectural significance, any significant changes to the exterior façade would be incompatible with historic preservation interests (of note, as part of this renovation work, extensive discussion and design plans were required to maintain the architectural character of the building).



With regard to an applicable clean-up level for these areas, the low-occupancy cleanup level of 25 ppm for bulk PCB Remediation Waste is proposed as an applicable criteria for the concrete, brick, and granite materials scheduled to remain in place based on the following rationale:

- The areas are not continuously occupied spaces; they are exterior doorways to the building; as such, occupancy for an individual will be less than 335 hours per year (less than an average of 6.7 hours/week);
- There are no seating or smoking areas within or at these locations (see above photographs) and congregating adjacent to the bank is not allowed for security reasons.

Concrete, brick and granite materials in former direct contact with the caulked window/door systems removed from Areas 1, 2, and 3 will be subject to surficial masonry grinding to an extent such that residual caulking and/or staining has been removed from the surfaces. Waste generated from the masonry grinding process will be managed as PCB waste  $\geq 50$  ppm with the caulking. The pilot test characterization data presented above suggests that the low-occupancy cleanup level of 25 ppm may be achievable in concrete, brick, and granite scheduled to remain in place after source material (caulking) removal.

Upon the completion of the surficial grinding activities, Woodard & Curran will visually inspect the work areas to document and inspect the extent of the removals. Verification samples will be collected from the underlying materials to assess residual PCB concentrations in the material remaining in place:

- Area 1: 10 l.f. brick (1 sample) and 18 l.f. concrete (1 sample); samples already collected as part of pilot test;
- Area 2: 20 l.f. granite (1 sample) and 45 l.f. concrete (2 samples); and
- Area 3: 25 l.f. granite (1 sample) and 70 l.f. concrete (2 samples); samples already collected as part of pilot test.

Samples will be collected from a depth of 0 to 0.5 inches in accordance with the EPA Region I Standard Operating Procedure for Sampling Porous Surfaces for PCBs (Revision 4, May 2011). Samples will be transported on ice under chain of custody protocols to Alpha Analytical Laboratory of Westborough, Massachusetts for extraction by USEPA Method 3540C (Soxhlet Extraction) and PCB analysis by USEPA Method 8082.

#### *In-Place Management Through Encapsulation Contingency*

Due to security issues associated with the bank, the new door and window systems are required to be installed immediately after the existing door and window systems are removed (i.e., prior to receiving bulk verification sample data from the laboratory). Given this condition and in order to eliminate potential PCB migration pathways from materials remaining in place with residual concentrations of PCBs, surfaces in former direct contact with removed source materials will be encapsulated immediately after source removal. The encapsulation / barrier for the concrete, brick, and granite materials in direct contact with the former caulking (i.e., former joints) will consist of a protective, epoxy such as Devcon 5, Sikagard 62, or equivalent material prior to being covered by the new window components and new bead of caulking. After encapsulation, one baseline surface wipe sample will be collected from each of the epoxy-encapsulated surfaces to evaluate the effectiveness of the encapsulation and establish a baseline for future monitoring, if needed. Wipe samples will be collected using hexane-saturated gauze wipes in accordance with the standard wipe test method (40 CFR 761.123).

Upon receipt of the bulk material verification sample data, the results will be compared to the 25 ppm cleanup level. If PCBs are below 25 ppm, then no follow-up actions will be conducted (however, the coatings will remain as the new windows will have already been installed over the coated surfaces).



If the bulk results are reported with PCBs > 25 ppm, the following actions will be taken:

- The wipe samples collected from the encapsulated surfaces will be submitted for laboratory analysis of PCBs, as the encapsulation approach will be warranted as a remediation technique; analytical results from the wipe samples will be evaluated in comparison to a 1 µg/100 cm<sup>2</sup> target level; and
- Lateral delineation samples will be collected to determine the extent of PCBs > 25 ppm in non-direct contact surfaces away from the joint; samples will be collected at the same frequencies described above for the direct contact verification samples (only in areas with direct contact samples in excess of 25 ppm).

EPA will be notified of any results > 25 ppm and alternate plans (e.g., clear coating application, risk-based evaluation of the actual detected results, etc.) will be evaluated in the context of the architectural considerations of the building.

#### Decontamination and Off-Site Disposal

Wet wiping, spraying, and/or vacuuming of tools and equipment in the work area will be performed at the completion of the work activity. At the completion of the project, any non-disposable equipment and tools that handled PCB material will be decontaminated following the procedures described in 40 CFR 761.79.

Any removed caulking, window frames, masonry, or other debris collected within the polyethylene controls will be gathered and placed in the appropriate waste containers at the end of each work day. After use, disposable PPE, poly sheeting, and other non-liquid materials generated during the work will be placed in the same containers as the PCB waste for disposal. PCB ≥ 50 ppm wastes will be stored on-site in secure, lined, and covered waste containers such as 55-gallon DOT-approved steel containers, cubic yard boxes, roll-offs, or equivalent approved containers staged for the collection of PCB wastes in accordance with 40 CFR 761.65. PCB waste containers will be properly labeled and marked in accordance with 40 CFR 761.40, and include hazardous waste labels, including the Massachusetts Hazardous Waste MA-02 classification.

The waste will be transported off-site for disposal ≥ 50 ppm PCB waste to an out-of-state hazardous waste landfill permitted to accept 40 CFR 761-regulated materials and Massachusetts hazardous waste (e.g., the Chemical Waste Management facility in Model City, New York, or equivalent). Copies of all waste shipment records will be collected from the contractor and maintained as part of the project record.

#### Recordkeeping and Additional Activities

Following completion of the work activities, records and documents per 40 CFR 761 will be generated and maintained at one location. A final report documenting the completion of the work activities, verification analytical results, volumes of disposed materials, and waste disposal records will be prepared and submitted to EPA.

If PCBs remain on-site at concentrations exceeding the 25 ppm target cleanup level beneath an in-place management system (i.e., an epoxy coating and new window/door system), these conditions will be documented in a Monitoring and Maintenance Implementation Plan (MMIP). The MMIP will also outline the long-term monitoring requirements associated with the encapsulated materials. This MMIP will be submitted to EPA for review following completion of the removal activities.

In addition, a deed notice will be prepared and recorded to document any residual levels of PCBs remaining at these locations at concentrations in excess of the unrestricted use cleanup levels.

#### Schedule

These work activities are scheduled to commence in mid-September 2013.





### Certification

Harvard hereby certifies that all the sampling plans, sample collection procedures, sample preparation procedures, extraction procedures and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the Harvard's Environmental Health, Safety and Emergency Management office and available for EPA inspection.

### Property Owner and Party Conducting the Cleanup

President and Fellows of Harvard College:

Gordon Reynolds  
Director of Environmental and Project Support Services for  
Environmental Health, Safety, and Emergency Management

August 15, 2013

Date

*\* Please note that Gordon Reynolds, Director of Environmental and Project Support Services for Environmental Health, Safety, and Emergency Management, is certifying this document on behalf of President and Fellows of Harvard College, and not as an individual.*

If you have any comments, questions, or require further information, please do not hesitate to contact me at the number listed above.

Sincerely,

WOODARD & CURRAN INC.

Jeffrey A. Hamel, LSP, LEP  
Senior Vice President

Enclosures:      Table 1 – Bulk Caulking and Sealant Results  
                         Table 2 – Exterior Pilot Test Bulk Sample Results  
                         Table 3 – Summary of Proposed Remediation and Verification  
                         Figure 1A and 1B – Characterization Sample Locations  
                         Attachment 1 – Laboratory Analytical Reports

**Table 1**  
**Bulk Caulking and Sealant Results**  
**Holyoke Center - Cambridge Trust Company - Cambridge, Massachusetts**

Physical Description	Interior / Exterior	Joint Type	Sample Location	Sample Date	Sample ID	Bulk Asbestos Results (%)	Reporting limit (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)	Total PCBs (mg/kg)
Type 1 - Light gray, moderately flexible, moderately hard	Interior and Exterior	Metal sidelight window frame concrete wall	Area 1	11/30/12	HCT-CBK-037	ND	3,204	ND	54,800	ND	<b>54,800</b>
		Metal sidelight window frame to concrete wall; south façade	Area 1	11/30/12	HCT-CBK-039	ND	3,564	ND	70,100	ND	<b>70,100</b>
Type 2 - Gray, moderately hard, moderately flexible	Exterior	Metal sidelight window frame to brick patio; south façade	Area 1	11/30/12	HCT-CBK-040	ND	10.1	ND	116	ND	<b>116</b>
Type 3 - Tan to grayish-tan, hard, brittle, sometimes painted offwhite	Interior	Metal partition window frame to glass pane	Area 1	11/30/12	HCT-CBK-036	2.0	258	ND	4,780	ND	<b>4,780</b>
Type 4 - Black, soft, flexible, visibly intact	Exterior	Metal window frame to glass pane; south façade	Area 1	11/30/12	HCT-CBK-038	ND	9.87	ND	31.2	ND	31.2
Type 5 - Light gray painted white, soft, flexible, visibly intact	Exterior	Metal window frame to concrete façade	Area 2	12/06/12	HCT-CBK-041	ND	2,647	ND	67,000	ND	<b>67,000</b>
Type 6 - Black, soft, flexible, visibly intact	Exterior	Slate window panel to concrete column	Area 2	12/06/12	HCT-CBK-042	ND	13.2	ND	71.4	ND	<b>71.4</b>
	Exterior	Slate window panel to granite patio slab	Area 2	12/06/12	HCT-CBK-046	ND	15.3	58	ND	ND	<b>58</b>
Type 7 - White painted white, soft, flexible	Exterior	Metal window frame to glass pane	Area 2	12/06/12	HCT-CBK-043	ND	1.72	ND	8.56	ND	8.56
Type 8 - White, soft, flexible, visibly intact	Interior	Metal window frame to glass pane	Area 2	11/29/12	HCT-CBK-026	ND	7.85	137	125	ND	<b>262</b>
		Metal window to drywall	Area 2	11/29/12	HCT-CBK-028	ND	2.81	40.8	ND	ND	40.8
Type 10 - White, soft, flexible	Interior	Metal I-beam to metal door frame	Area 2	11/29/12	HCT-CBK-027	ND	4.7	21.5	17.1	ND	38.6
Type 11 -Off-white, soft, flexible, visibly intact	Exterior	Metal window frame to metal panel	Area 2	12/06/12	HCT-CBK-045	ND	4.79	10.1	ND	ND	10.1
Type 12 - Tan painted white, flexible, moderately hard (may be thick layer of paint)	Exterior	Metal window frame to metal window frame	Area 2	12/06/12	HCT-CBK-044	ND	3.76	ND	7.95	ND	7.95
Type 9 - Gray, flexible, moderately hard	Interior	Metal interior lobby window frame to glass pane	Area 3	11/29/12	HCT-CBK-023	ND	16.8	ND	ND	267	<b>267</b>
Type 13 - Gray-silver, flexible, soft, visibly intact	Interior	Metal interior door frame to metal window frame	Area 3	11/29/12	HCT-CBK-025	ND	3.1	ND	16	10.5	26.5

Notes:

1. Laboratory samples were extracted by Soxhlet (Method 3540C) and analyzed for PCBs by Method 8082
2. Bulk sample results are reported in units of milligrams per kilogram (mg/kg)
3. ND = not detected above laboratory's minimum reporting limit, as indicated.

**Table 2**  
**Exterior Pilot Test Bulk Sample Results**  
**Holyoke Center - Cambridge Trust Company - Cambridge, Massachusetts**

Media	Joint Type	Sample Depth (inches)	Sample Distance from Joint (inches)	Sample Location	Sample Date	Sample ID	Reporting Limit	Total PCBs
<b>Area 1 - South Façade Lower Level Sidelight Windows</b>								
Brick	Lower horizontal window frame to brick paver joint	0.0 - 0.5	0.0 - 1.0	Former direct contact with caulking; adjacent to easternmost sidelight window	07/25/13	HCT-CBB-133	0.056	0.223
Concrete	Eastern vertical window frame to concrete façade joint	0.0 - 0.5	0.25 - 1.25	0.25 inches from caulking; Eastern vertical sidelight window frame joint of easternmost sidelight window; 1.5 feet ags	07/25/13	HCT-CBC-134	0.29	<b>4.24</b>
<b>Area 3 - Ground Level West Façade Door and Windows</b>								
Granite	Lower horizontal slate panel to granite paver	0.0 - 0.5	0.0 - 1.0	Former direct contact with caulking; adjacent to southernmost sidelight window	07/25/13	HCT-CBC-130	0.057	0.190
Concrete	Southern vertical window frame to concrete façade joint	0.0 - 0.5	0.25 - 1.25	0.25 inches from caulking; Southern vertical sidelight window frame joint of southernmost sidelight window; 3 feet ags	07/25/13	HCT-CBC-131	1.80	<b>19.0</b>
Concrete	Upper horizontal window frame to concrete spandrel joint	0.0 - 0.5	0.25 - 1.25	0.25 inches from former caulked joint; upper horizontal joint of southernmost sidelight window	07/25/13	HCT-CBC-132	0.58	<b>8.45</b>

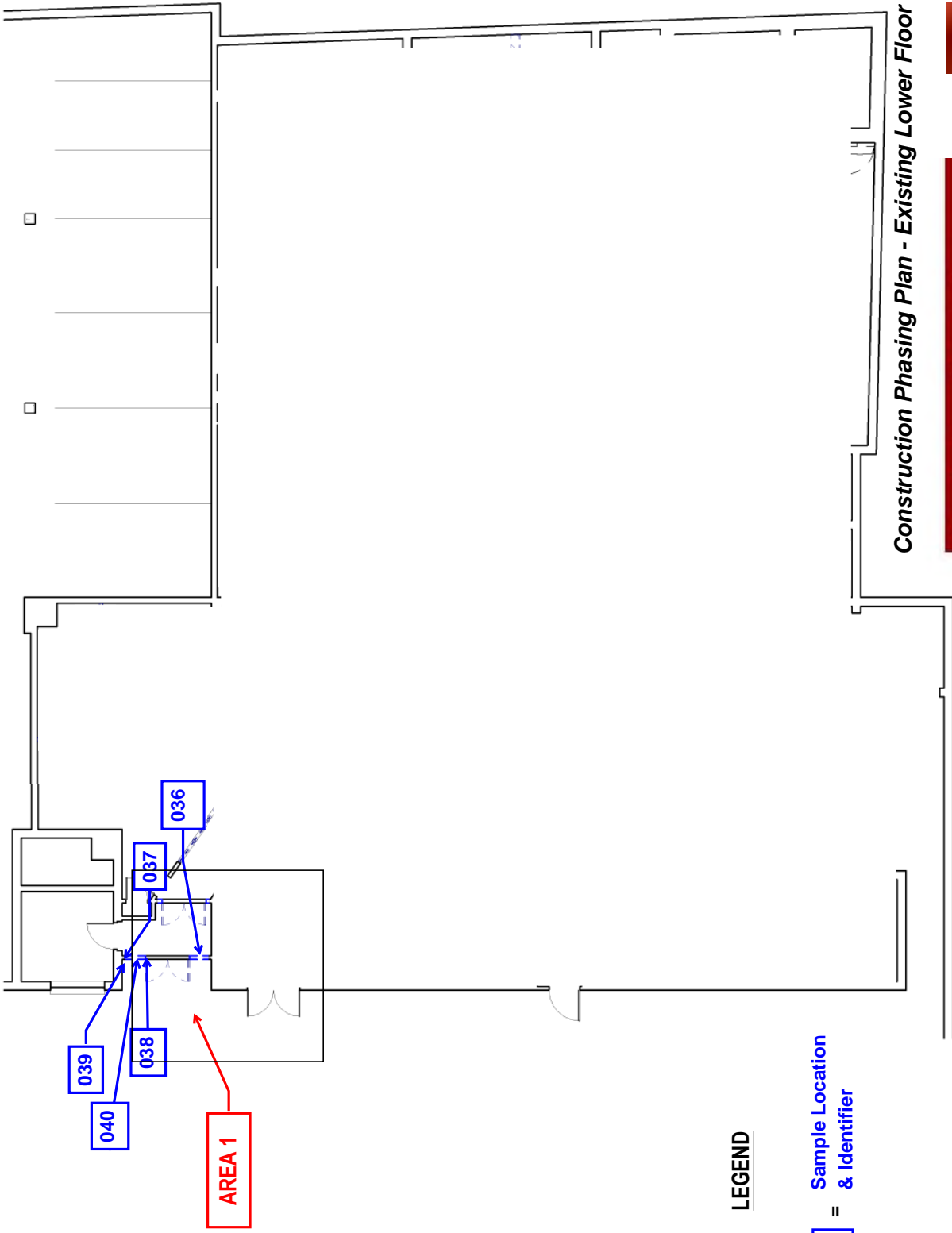
Notes:

1. Laboratory samples were extracted by Soxhlet (Method 3540C) and analyzed for PCBs by Method 8082.
2. Results are reported in units of milligrams per kilogram (mg/kg).
3. All PCBs were reported as Aroclor 1254; no other Aroclors were detected above laboratory reporting limits.

**Table 3**  
**Summary of Proposed Remediation and Verification**  
**Holyoke Center - Cambridge Trust Company - Cambridge, Massachusetts**

Material	Area 1 - South Façade Lower Level Sidelight Windows		Area 2 - West Façade Ground Level ATM Windows		Area 3 - West Façade Ground Level Door and Sidelight Windows	
	Remediation	Verification	Remediation	Verification	Remediation	Verification
Perimeter caulking, glazing sealants, window/door components, and slate cladding	Remove and dispose of these materials in entirety as $\geq 50$ ppm PCB waste	Visual inspection only; all materials removed in entirety	Remove and dispose of these materials in entirety as $\geq 50$ ppm PCB waste	Visual inspection only; all materials removed in entirety	Remove and dispose of these materials in entirety as $\geq 50$ ppm PCB waste	Visual inspection only; all materials removed in entirety
Direct contact brick or granite at lower horizontal caulked joint	10 lf of brick; perform surficial grinding to remove residual caulking and/or staining from brick in former direct contact with caulking; encapsulate former direct contact surface with 2 coats epoxy prior to installing new windows/doors	Collect <b>one post-removal bulk verification sample</b> to determine PCB presence in remaining brick; collect <b>one post-encapsulation epoxy wipe sample</b> for analysis of baseline conditions if 25 ppm cleanup level is not met in bulk sample	20 l.f. of granite; perform surficial grinding to remove residual caulking and/or staining from granite in former direct contact with caulking; encapsulate former direct contact surface with 2 coats epoxy prior to installing new windows/doors	Collect <b>one post-removal bulk verification sample</b> to determine PCB presence in remaining granite; collect <b>one post-encapsulation epoxy wipe sample</b> for analysis of baseline conditions if 25 ppm cleanup level is not met in bulk sample	25 l.f. of granite; perform surficial grinding to remove residual caulking and/or staining from granite in former direct contact with caulking; encapsulate former direct contact surface with 2 coats epoxy prior to installing new windows/doors	Collect <b>one post-removal bulk verification sample</b> to determine PCB presence in remaining granite; collect <b>one post-encapsulation epoxy wipe sample</b> for analysis of baseline conditions if 25 ppm cleanup level is not met in bulk sample
Direct contact concrete façade/structural concrete	18 lf (9 ft each side of door); perform surficial grinding to remove residual caulking and/or staining from concrete in former direct contact with caulking; encapsulate former direct contact surface with 2 coats epoxy prior to installing new windows/doors	Collect <b>one post-removal bulk verification sample</b> to determine PCB presence in remaining concrete; collect <b>one post-encapsulation epoxy wipe sample</b> for analysis of baseline conditions if 25 ppm cleanup level is not met in bulk sample	45 lf; perform surficial grinding to remove residual caulking and/or staining from concrete in former direct contact with caulking; encapsulate former direct contact surface with 2 coats epoxy prior to installing new windows/doors	Collect <b>two post-removal bulk verification samples</b> to determine PCB presence in remaining concrete; collect <b>one post-encapsulation epoxy wipe sample</b> for analysis of baseline conditions if 25 ppm cleanup level is not met in bulk sample	70 lf; perform surficial grinding to remove residual caulking and/or staining from concrete in former direct contact with caulking; encapsulate former direct contact surface with 2 coats epoxy prior to installing new windows/doors	Collect <b>two post-removal bulk verification samples</b> to determine PCB presence in remaining concrete; collect <b>one post-encapsulation epoxy wipe sample</b> for analysis of baseline conditions if 25 ppm cleanup level is not met in bulk sample
Non-direct contact concrete, brick, and granite surfaces away from former joint	No remediation warranted if direct contact bulk samples meet 25 ppm cleanup level; lateral delineation sampling to be performed and/or alternate plans to be developed, if needed		No remediation warranted if direct contact bulk samples meet 25 ppm cleanup level; lateral delineation sampling to be performed and/or alternate plans to be developed, if needed		No remediation warranted if direct contact bulk samples meet 25 ppm cleanup level; lateral delineation sampling to be performed and/or alternate plans to be developed, if needed	





**LEGEND**

039 = Sample Location & Identifier

**Construction Phasing Plan - Existing Lower Floor**

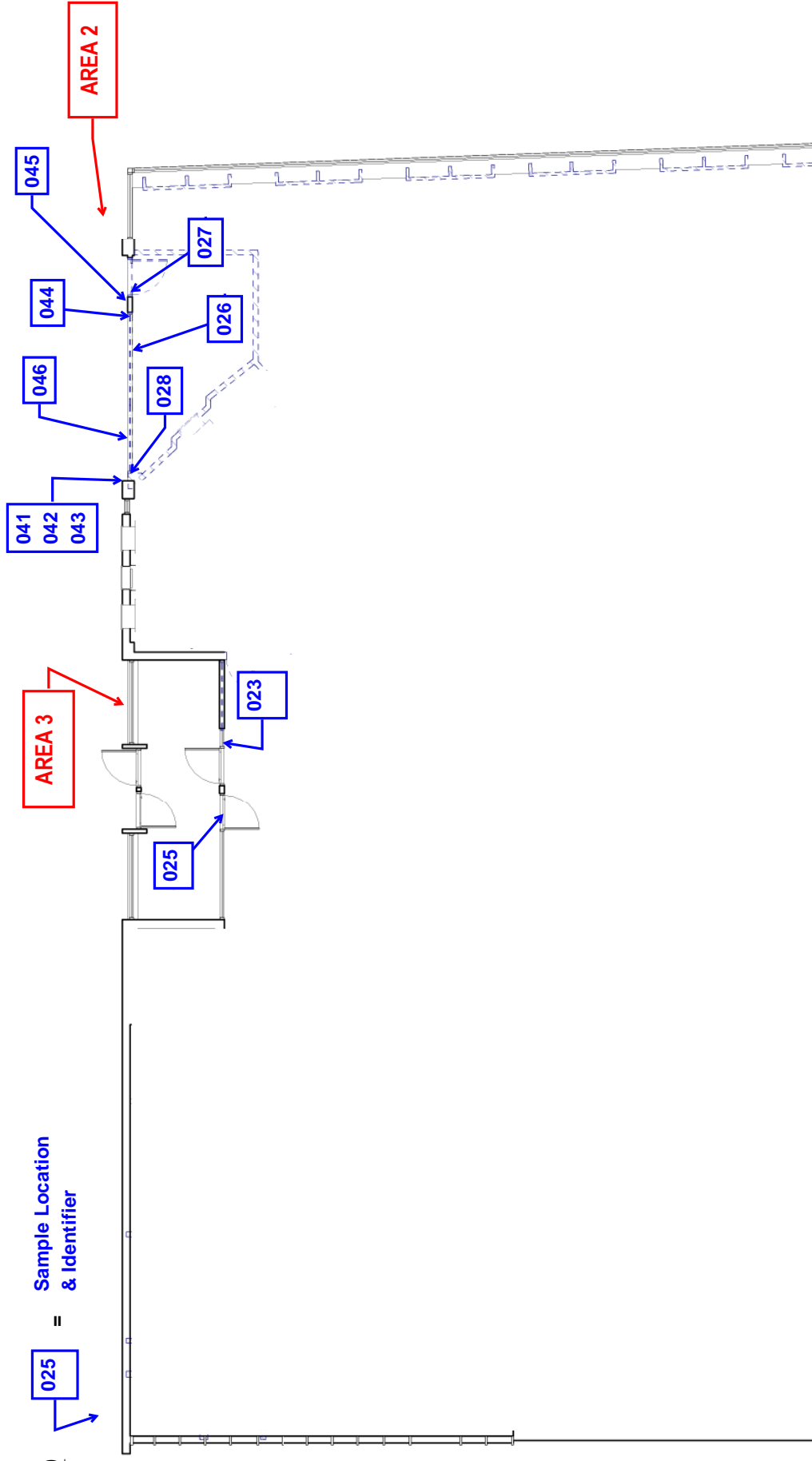
**Cambridge Trust Company**

Main Office Renovation

**FIGURE 1A**  
Characterization Sample  
Locations -  
Lower Floor

**LEGEND**

 = Sample Location  
& Identifier



**Construction Phasing Plan - Existing Ground Floor**

**Cambridge Trust Company**

Main Office Renovation



**FIGURE 1B**  
Characterization Sample Locations -  
Ground Floor



## **ATTACHMENT 1:    LABORATORY ANALYTICAL REPORTS**

February 6, 2013

Ms. Amy Wallace  
Woodard & Curran  
41 Hutchins Drive  
Portland ME 04102

**RE: Analytical Results Case Narrative  
Analytics # 74748  
Cambridge Trust Project# 226334**

Dear Ms Wallace:

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082A.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- PCB Form 1 Data Sheet for Samples and Blanks
  - Chromatograms
- PCB Form 10 Confirmation Results
- PCB Form 3 MS/MSD (LCS) Recoveries
- Chain of Custody (COC) Forms



## QC NON-CONFORMANCE SUMMARY

**Sample Receipt:**

No exceptions.

**PCBs by EPA Method 8082A:**

No results were reported below the quantitation limit.

All Samples were analyzed at dilutions due to concentrations of PCBs detected in the samples.

If you have any questions on these results, please do not hesitate to contact me.

Sincerely,  
ANALYTICS Environmental Laboratory, LLC

A handwritten signature in black ink, appearing to read 'S. L. Knollmeyer', with a long horizontal flourish extending to the right.

Stephen L. Knollmeyer  
Laboratory Director

Ms. Amy Wallace  
Woodard & Curran  
41 Hutchins Drive  
Portland ME 04102

**Report Number: 74748**

**Revision: Rev. 0**

**Re: Cambridge Trust (Project No: 226334)**

Enclosed are the results of the analyses on your sample(s). Samples were received on 29 January 2013 and analyzed for the tests listed. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

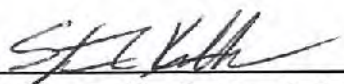
**Sample Analysis:** The attached pages detail the Client Sample IDs, Lab Sample IDs, and Analyses requested

**Sample Receipt Exceptions:** None

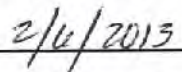
Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, Virginia, Maryland, North Carolina, and is accredited by the Department of Defense (DOD) ELAP program. A list of actual certified parameters is available upon request.

If you have any questions on these results, please do not hesitate to contact us.

Authorized signature

  
Stephen L. Knollmeyer Lab. Director

Date

  
2/6/2013

**This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.**

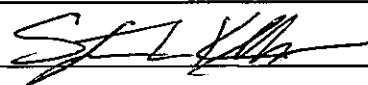
**CLIENT: Woodard & Curran**

**REPORT NUMBER: 74748**

**REV: Rev. 0**

**PROJECT: Cambridge Trust (Project No: 226334)**

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
74748-7	11/29/12	HCT-CBK-023	EPA 8082 (PCBs only)	
74748-8	11/29/12	HCT-CBK-025	EPA 8082 (PCBs only)	
74748-9	11/29/12	HCT-CBK-026	EPA 8082 (PCBs only)	
74748-10	11/29/12	HCT-CBK-027	EPA 8082 (PCBs only)	
74748-11	11/29/12	HCT-CBK-028	EPA 8082 (PCBs only)	
74748-17	11/30/12	HCT-CBK-036	EPA 8082 (PCBs only)	
74748-18	11/30/12	HCT-CBK-037	EPA 8082 (PCBs only)	
74748-19	11/30/12	HCT-CBK-038	EPA 8082 (PCBs only)	
74748-20	11/30/12	HCT-CBK-039	EPA 8082 (PCBs only)	
74748-21	11/30/12	HCT-CBK-040	EPA 8082 (PCBs only)	
74748-22	12/05/12	HCT-CBK-041	EPA 8082 (PCBs only)	
74748-23	12/05/12	HCT-CBK-042	EPA 8082 (PCBs only)	
74748-24	12/05/12	HCT-CBK-043	EPA 8082 (PCBs only)	
74748-25	12/05/12	HCT-CBK-044	EPA 8082 (PCBs only)	
74748-26	12/05/12	HCT-CBK-045	EPA 8082 (PCBs only)	
74748-27	12/05/12	HCT-CBK-046	EPA 8082 (PCBs only)	
74748-28	12/05/12	HCT-CBKD-047	Electronic Data Deliverable	
	12/05/12	HCT-CBKD-047	EPA 8082 (PCBs only)	

<b>MassDEP Analytical Protocol Certification Form</b>					
Laboratory Name: Analytics Environmental Laboratory, LLC			Project #: 74748		
Project Location: Cambridge Trust			RTN:		
<b>This Form provides certifications for the following data set. Laboratory Sample ID Number(s):</b> 74748-1 through 74748-28					
Matrices: <input type="checkbox"/> Groundwater/Surface Water <input type="checkbox"/> Soil/Sediment <input type="checkbox"/> Drinking Water <input type="checkbox"/> Air <input checked="" type="checkbox"/> Other					
<b>CAM Protocol (check all that apply below):</b>					
8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input checked="" type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>	
<b>Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status</b>					
<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>E</b>	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Responses to Questions G, H and I below are required for "Presumptive Certainty" status</b>					
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.</b>					
<b>H</b>	Were ALL QC performance standards specified in the CAM protocol(s) achieved?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<sup>1</sup> All negative responses must be addressed in an attached laboratory narrative.					
<b>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</b>					
Signature: 			Position: Laboratory Director		
Printed Name: Stephen L. Knollmeyer			Date: February 06, 2013		



### Surrogate Compound Limits

	Matrix: Units:	Aqueous % Recovery	Solid % Recovery	Method
<b>Volatile Organic Compounds - Drinking Water</b>				
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
<b>Volatile Organic Compounds</b>				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
<b>Semi-Volatile Organic Compounds</b>				
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
<b>PAH's by SIM</b>				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
<b>Pesticides and PCBs</b>				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
<b>Herbicides</b>				
Dichloroacetic acid (DCAA)		30-150	30-150	
<b>Gasoline Range Organics/TPH Gasoline</b>				
Trifluorotoluene TFT (FID)		60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
<b>Diesel Range Organics/TPH Diesel</b>				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH
<b>Volatile Petroleum Hydrocarbons</b>				
2,5-Dibromotoluene (PID)		70-130	70-130	MADEP VPH May 2004 Rev1.1
2,5-Dibromotoluene (FID)		70-130	70-130	
<b>Extracatable Petroleum Hydrocarbons</b>				
1-chloro-octadecane (aliphatic)		40-140	40-140	MADEP EPH May 2004 Rev1.1
o-Terphenyl (aromatic)		40-140	40-140	
2-Fluorobiphenyl (Fractionation)		40-140	40-140	
2-Bromonaphthalene (fractionation)		40-140	40-140	

## PCB DATA SUMMARIES

Ms. Amy Wallace  
Woodard & Curran  
41 Hutchins Drive  
Portland ME 04102

February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-023

**Lab Sample ID:** 74748-7  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 510  
**Collection Date:** 11/29/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	16800	U
PCB-1221	16800	U
PCB-1232	16800	U
PCB-1242	16800	U
PCB-1248	16800	U
PCB-1254	16800	U
PCB-1260	16800	267000
PCB-1262	16800	U
PCB-1268	16800	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3665A.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-7,1:50,,A/C

Column ID: 0.25 mm

Data File: L32703.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 510.2

Column ID: 0.25 mm

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1260	266762	223509	17.6	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

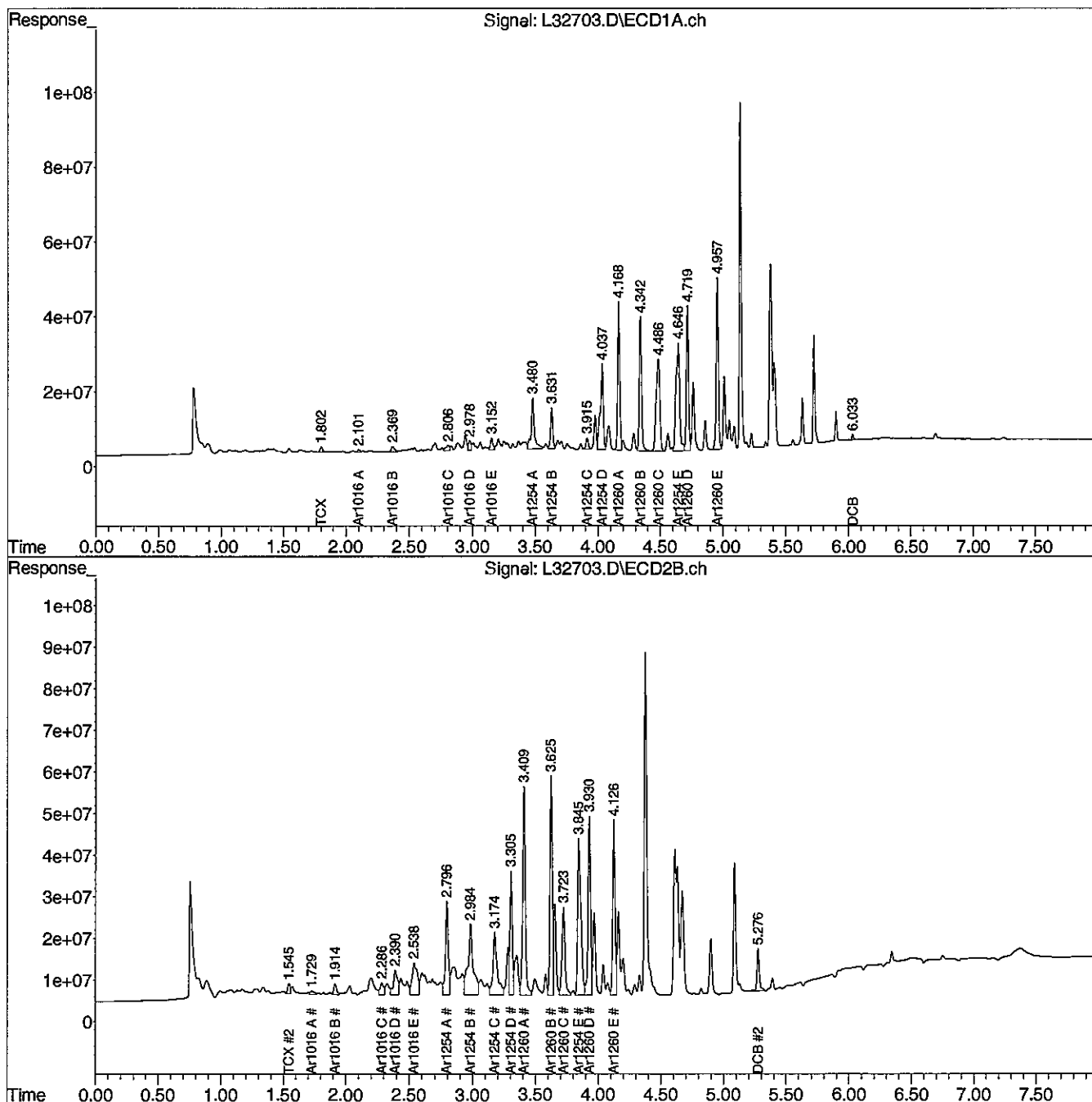
Comments: \_\_\_\_\_



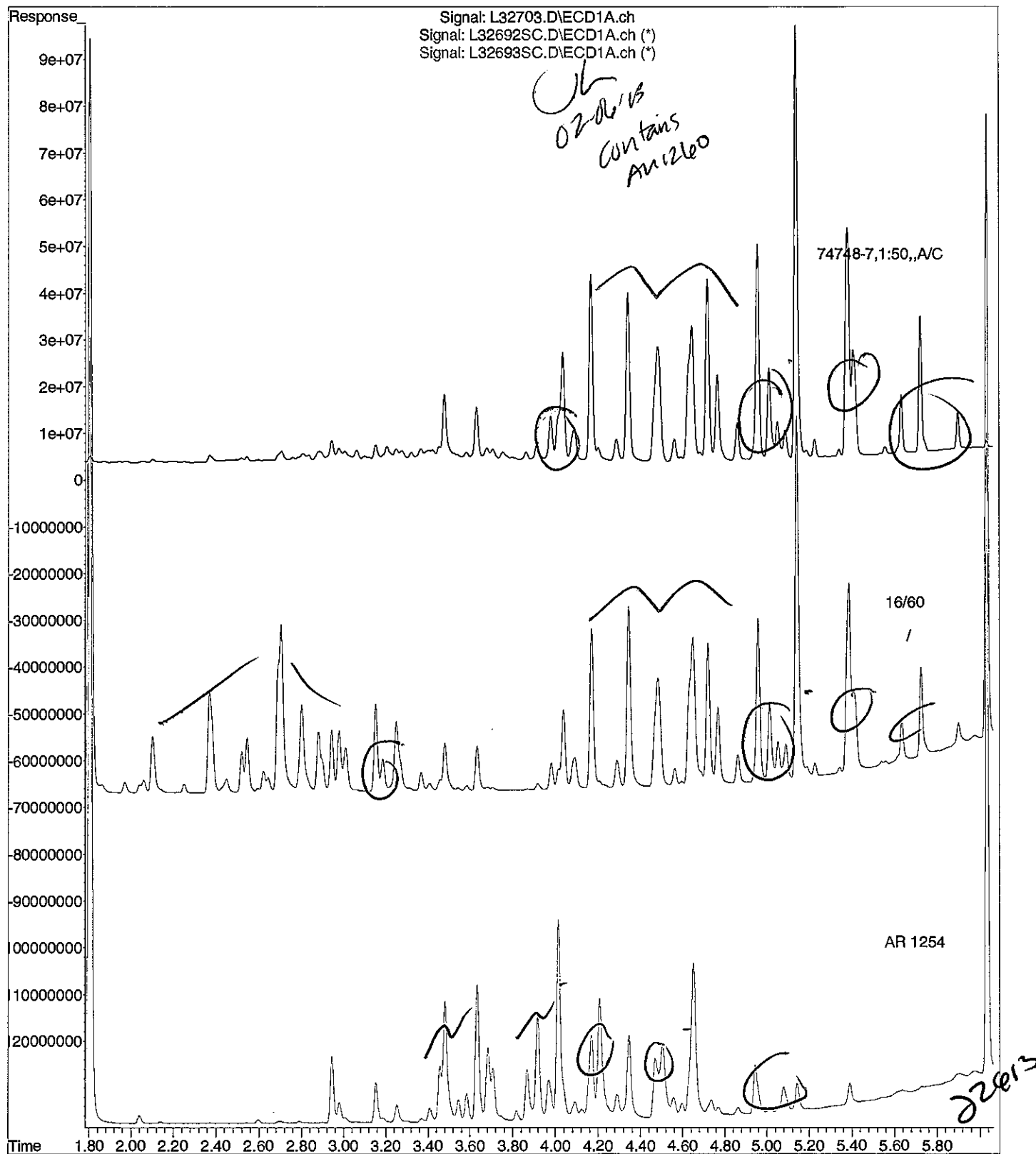
Data Path : C:\msdchem\1\DATA\020513-L\  
Data File : L32703.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 5 Feb 2013 3:50 pm  
Operator : JK  
Sample : 74748-7,1:50,,A/C  
Misc : SOIL  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
Integration File signal 2: autoint2.e  
Quant Time: Feb 06 09:30:58 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Tue Feb 05 18:58:20 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32703.D  
Operator : JK  
Acquired : 5 Feb 2013 3:50 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-7,1:50,,A/C  
Misc Info : SOIL  
Vial Number: 15



Ms. Amy Wallace  
Woodard & Curran  
41 Hutchins Drive  
Portland ME 04102

February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-025

**Lab Sample ID:** 74748-8  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 94  
**Collection Date:** 11/29/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	3100	U
PCB-1221	3100	U
PCB-1232	3100	U
PCB-1242	3100	U
PCB-1248	3100	U
PCB-1254	3100	<b>16000</b>
PCB-1260	3100	<b>10500</b>
PCB-1262	3100	U
PCB-1268	3100	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	65	%
Decachlorobiphenyl	65	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-8,1:10,,SI GEL

Column ID: 0.25 mm

Data File: L32704.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 93.5

Column ID: 0.25 mm

COMPOUND	Column #1	Column #2	RPD		#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1260	I0544	8788	18.2		
PCB 1254	I3161	I6028	19.6		

# Column to be used to flag RPD values greater than QC limit of 40%

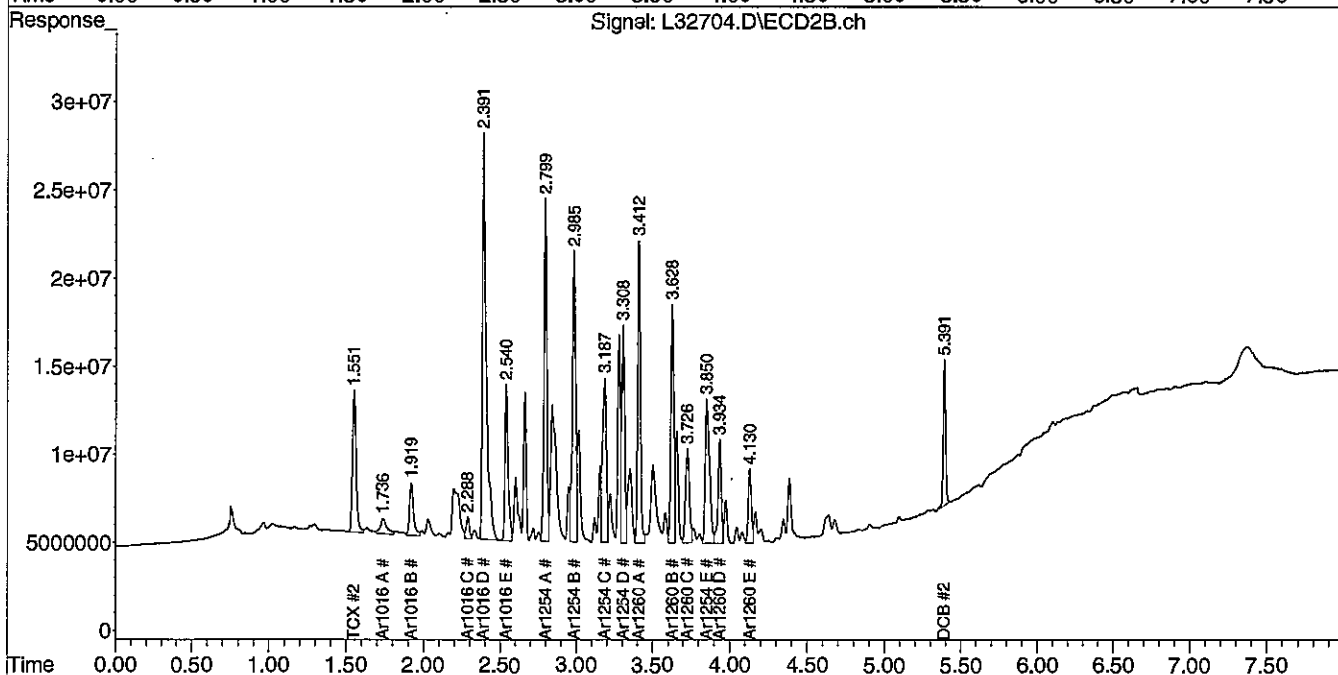
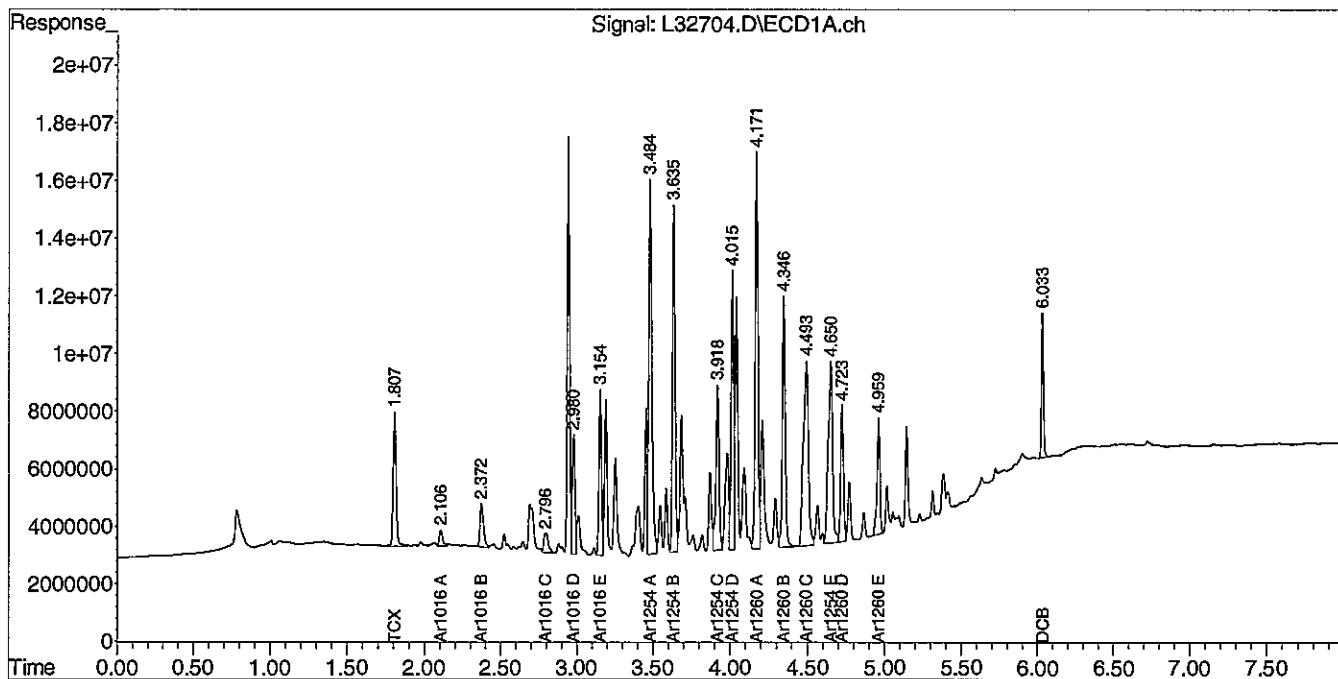
\* Values outside QC limits

Comments: \_\_\_\_\_

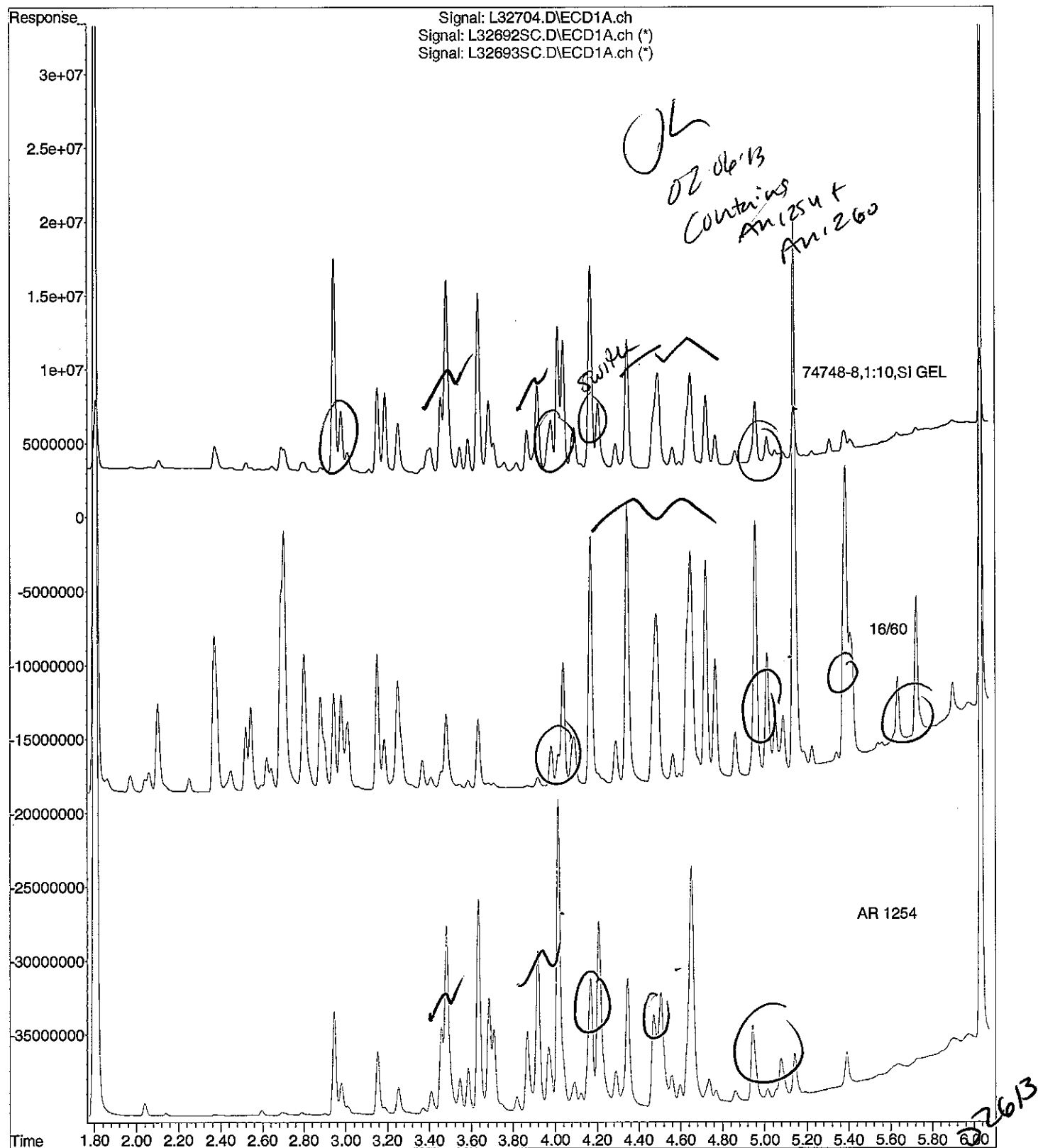
Data Path : C:\msdchem\1\DATA\020513-L\  
Data File : L32704.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 5 Feb 2013 4:01 pm  
Operator : JK  
Sample : 74748-8,1:10,,SI GEL  
Misc : SOIL  
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
Integration File signal 2: autoint2.e  
Quant Time: Feb 06 09:31:00 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Tue Feb 05 18:58:20 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32704.D  
Operator : JK  
Acquired : 5 Feb 2013 4:01 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-8,1:10,,SI GEL  
Misc Info : SOIL  
Vial Number: 16





Ms. Amy Wallace  
Woodard & Curran  
41 Hutchins Drive  
Portland ME 04102

February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-026

**Lab Sample ID:** 74748-9  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 238  
**Collection Date:** 11/29/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	7850	U
PCB-1221	7850	U
PCB-1232	7850	U
PCB-1242	7850	U
PCB-1248	7850	137000
PCB-1254	7850	125000
PCB-1260	7850	U
PCB-1262	7850	U
PCB-1268	7850	U
<b>Surrogate Standard Recovery</b>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature 

PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-9,1:20,,SI GEL
Column ID: 0.25 mm	Data File: L32705.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 238.1
Column ID: 0.25 mm	

COMPOUND	Column #1	Column #2		
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1248	131461	136873	4.0	
PCB 1254	114527	125247	8.9	

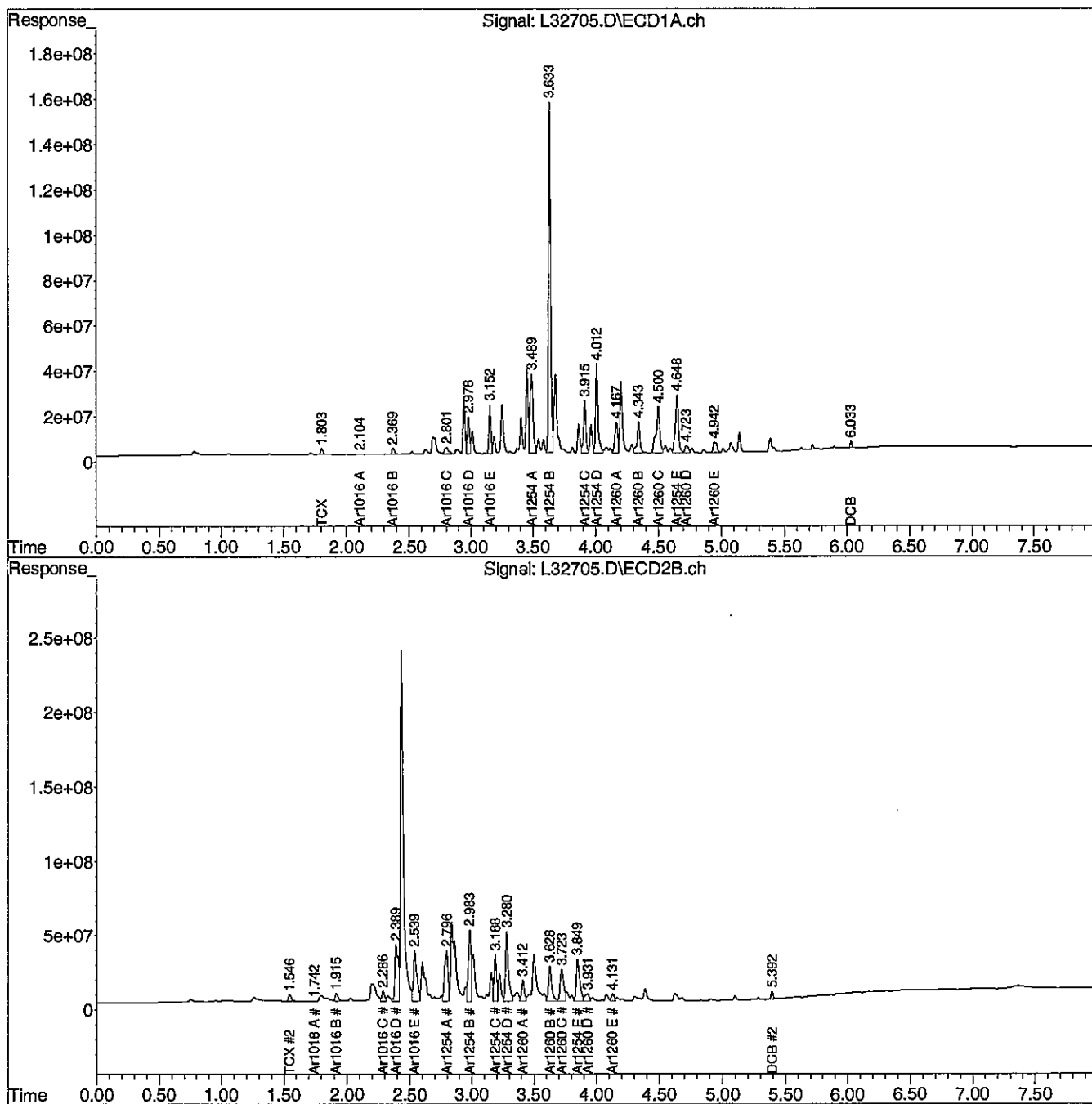
# Column to be used to flag RPD values greater than QC limit of 40%  
\* Values outside QC limits

Comments: \_\_\_\_\_

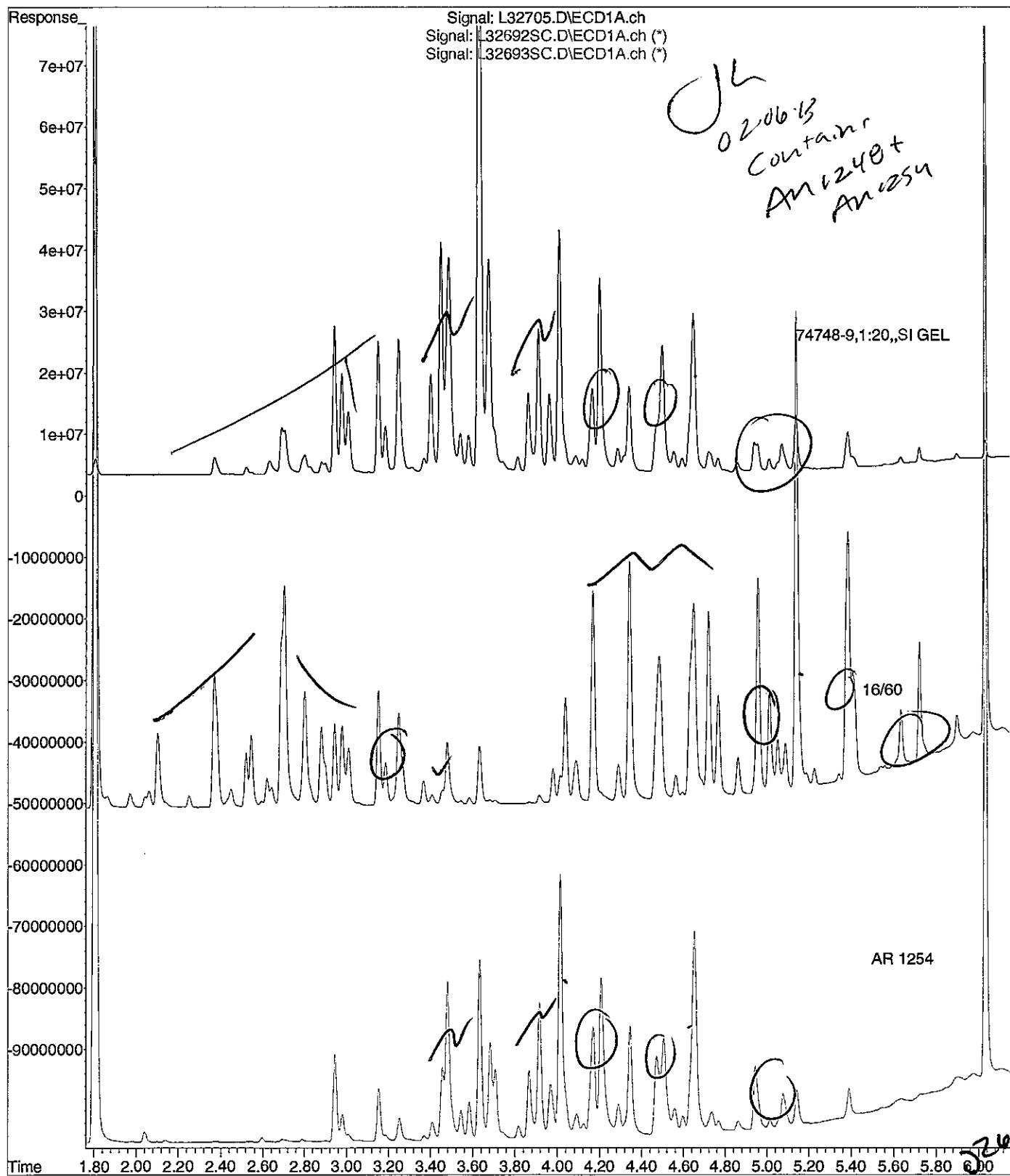
Data Path : C:\msdchem\1\DATA\020513-L\  
Data File : L32705.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 5 Feb 2013 4:11 pm  
Operator : JK  
Sample : 74748-9,1:20,,SI GEL  
Misc : SOIL  
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
Integration File signal 2: autoint2.e  
Quant Time: Feb 06 10:40:26 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Tue Feb 05 18:58:20 2013  
Response via : Initial Calibration  
Integrator: ChemStation

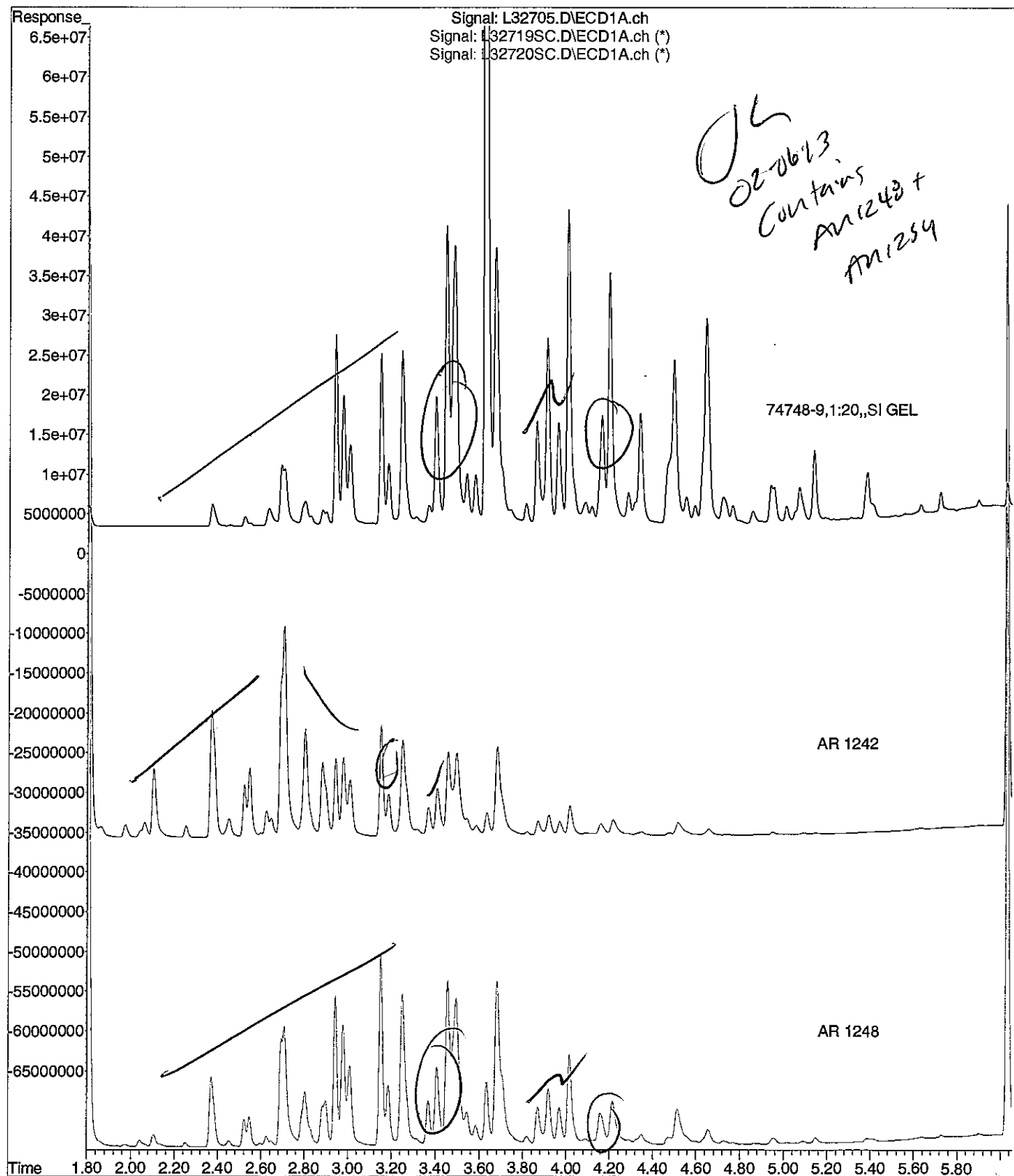
Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32705.D  
Operator : JK  
Acquired : 5 Feb 2013 4:11 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-9,1:20,,SI GEL  
Misc Info : SOIL  
Vial Number: 17



File :C:\msdchem\1\DATA\020513-L\L32705.D  
Operator : JK  
Acquired : 5 Feb 2013 4:11 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-9,1:20,,SI GEL  
Misc Info : SOIL  
Vial Number: 17



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust

**Project Number:** 226334

**Field Sample ID:** HCT-CBK-027

**Lab Sample ID:** 74748-10

**Matrix:** Solid

**Percent Solid:** 100

**Dilution Factor:** 143

**Collection Date:** 11/29/12

**Lab Receipt Date:** 01/29/13

**Extraction Date:** 01/30/13

**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	4720	U
PCB-1221	4720	U
PCB-1232	4720	U
PCB-1242	4720	U
PCB-1248	4720	21500
PCB-1254	4720	17100
PCB-1260	4720	U
PCB-1262	4720	U
PCB-1268	4720	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene 72 %

Decachlorobiphenyl 74 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-10,1:5,,S1 GEL
Column ID: 0.25 mm	Data File: L32706.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 142.9
Column ID: 0.25 mm	

COMPOUND	Column #1	Column #2	RPD	#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)		
PCB 1248	21113	21494	1.8	
PCB 1254	13938	17138	20.6	

# Column to be used to flag RPD values greater than QC limit of 40%

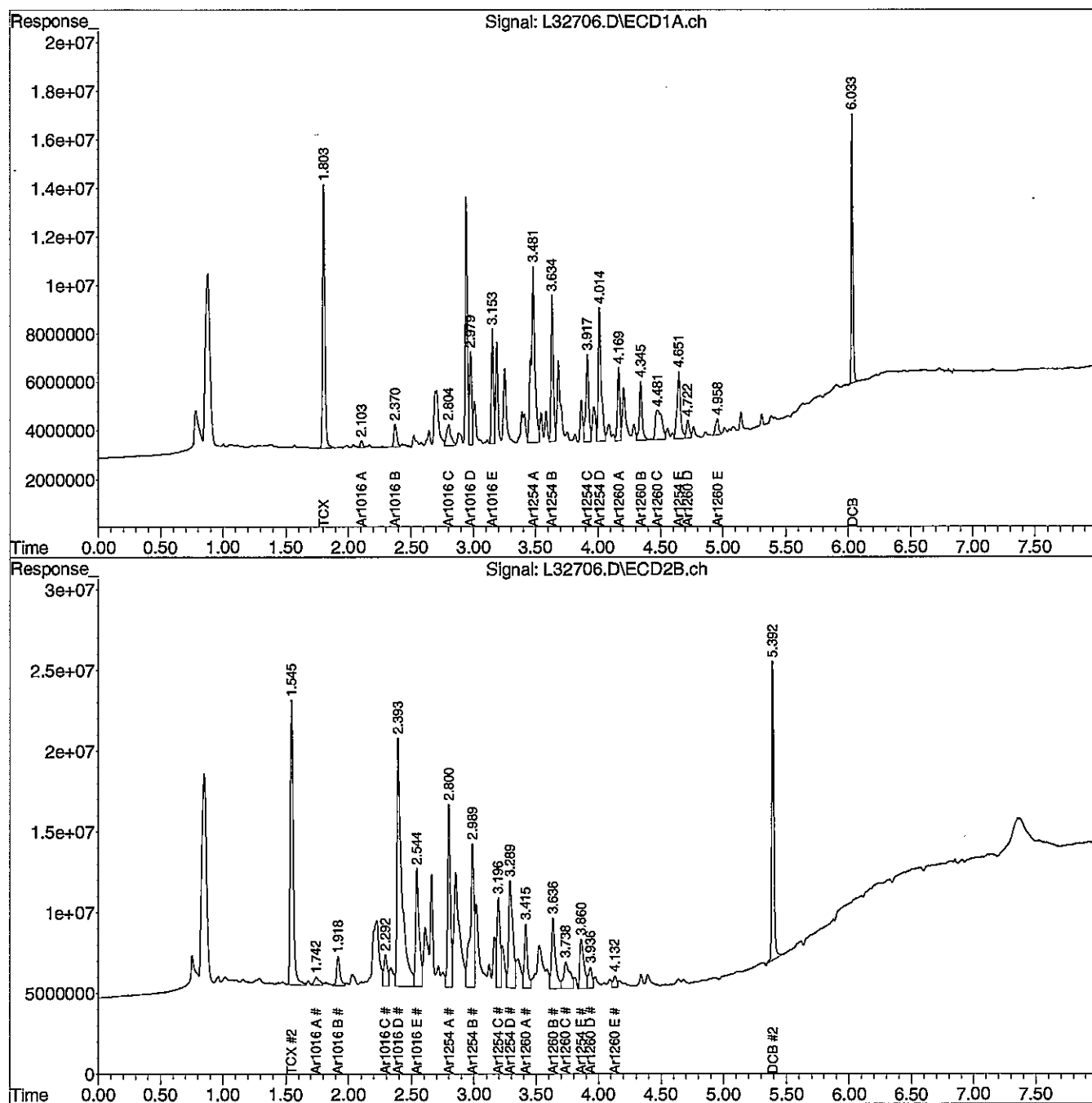
\* Values outside QC limits

Comments: \_\_\_\_\_

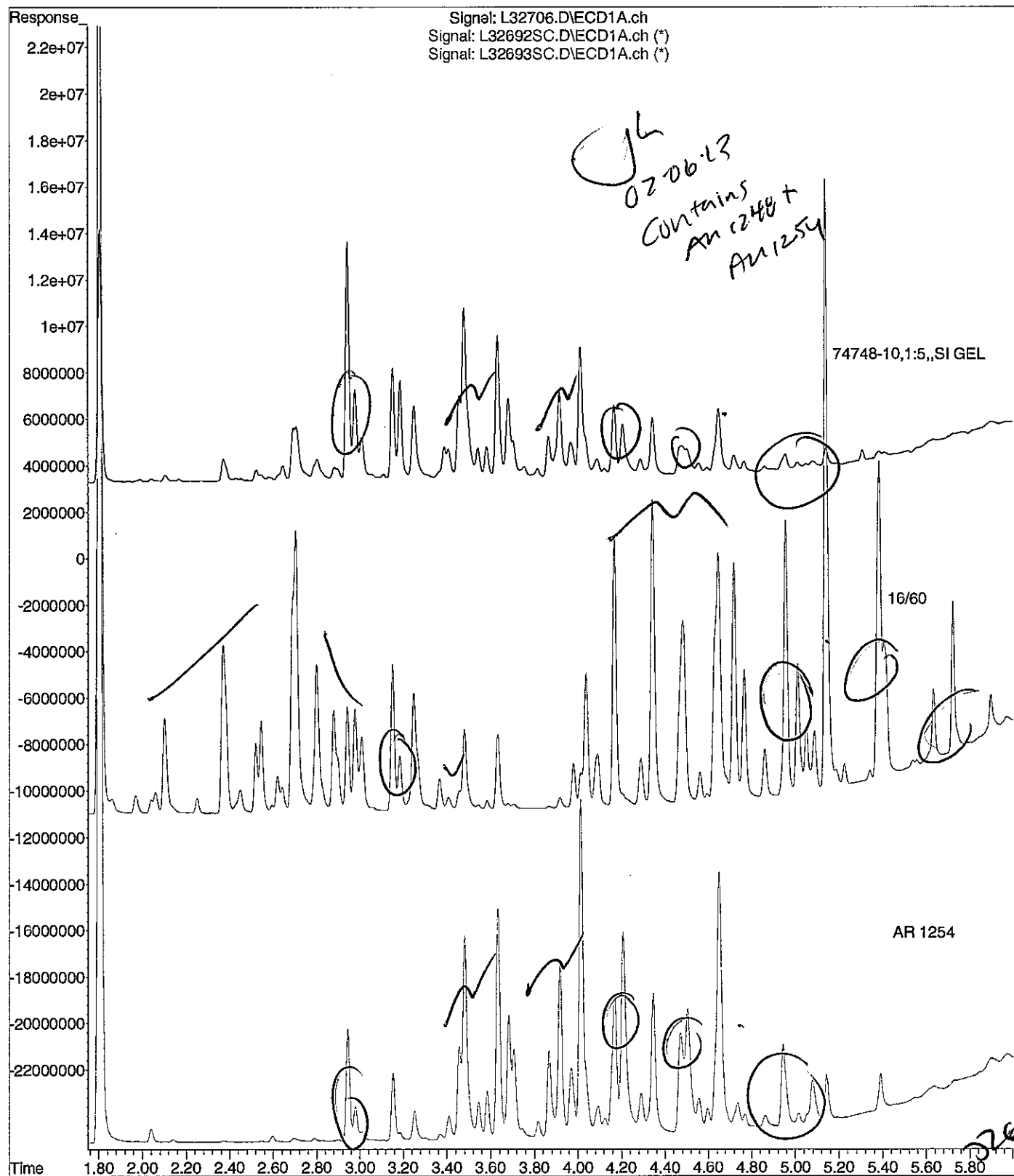
Data Path : C:\msdchem\1\DATA\020513-L\  
Data File : L32706.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 5 Feb 2013 4:21 pm  
Operator : JK  
Sample : 74748-10,1:5,,SI GEL  
Misc : SOIL  
ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
Integration File signal 2: autoint2.e  
Quant Time: Feb 06 09:31:04 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Tue Feb 05 18:58:20 2013  
Response via : Initial Calibration  
Integrator: ChemStation

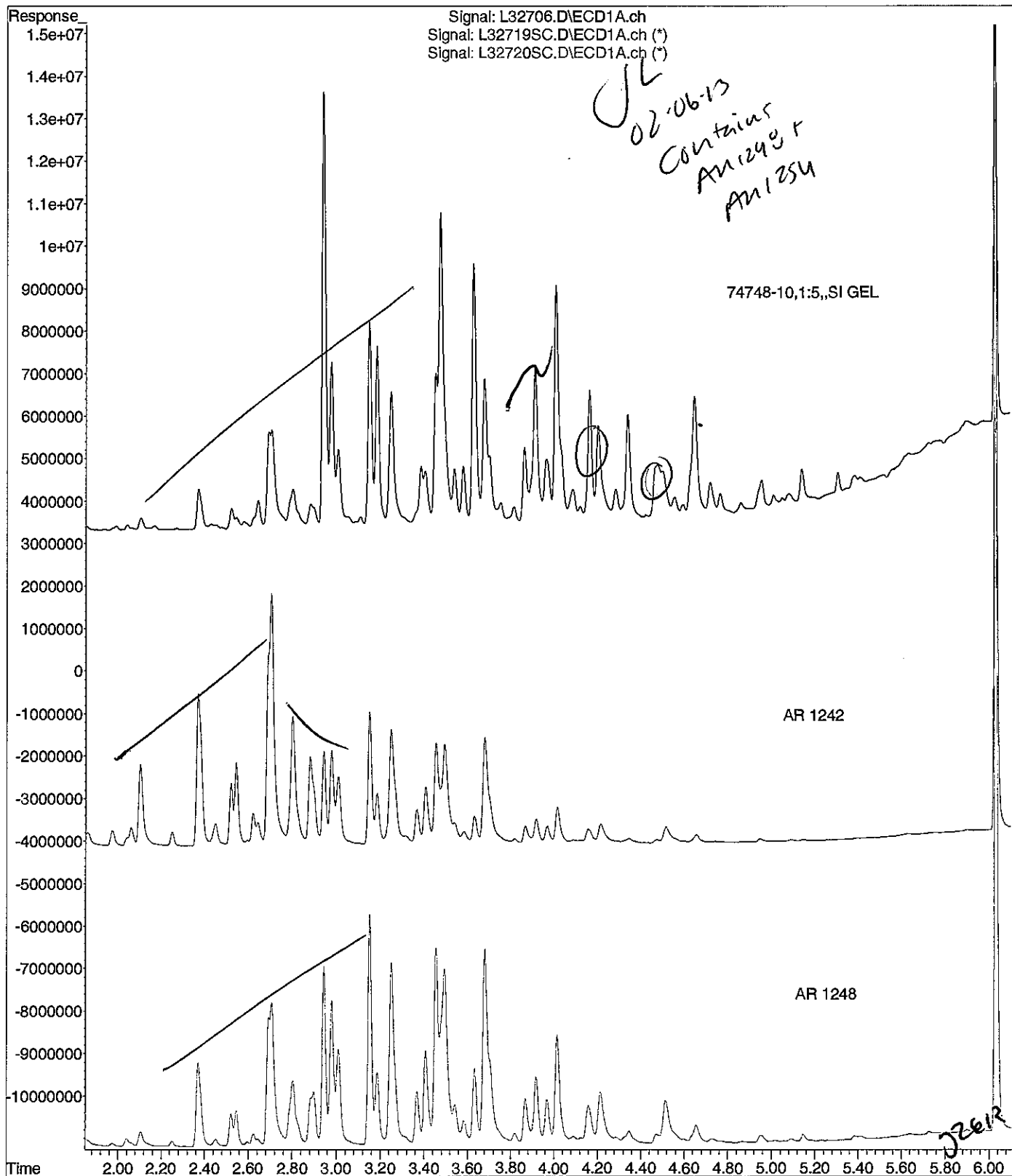
Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0.25 um Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32706.D  
Operator : JK  
Acquired : 5 Feb 2013 4:21 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-10,1:5,,SI GEL  
Misc Info : SOIL  
Vial Number: 18



File :C:\msdchem\1\DATA\020513-L\L32706.D  
Operator : JK  
Acquired : 5 Feb 2013 4:21 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-10,1:5,,SI GEL  
Misc Info : SOIL  
Vial Number: 18



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-028

**Lab Sample ID:** 74748-11  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 85  
**Collection Date:** 11/29/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu$ g/kg	Results $\mu$ g/kg
PCB-1016	2810	U
PCB-1221	2810	U
PCB-1232	2810	U
PCB-1242	2810	U
PCB-1248	2810	40800
PCB-1254	2810	U
PCB-1260	2810	U
PCB-1262	2810	U
PCB-1268	2810	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	76	%
Decachlorobiphenyl	76	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.

PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-11,1:5,,SI GEL

Column ID: 0.25 mm

Data File: L32707.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 84.7

Column ID: 0.25 mm

COMPOUND	Column #1	Column #2	RPD		#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1248	34367	40779	17.1		

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

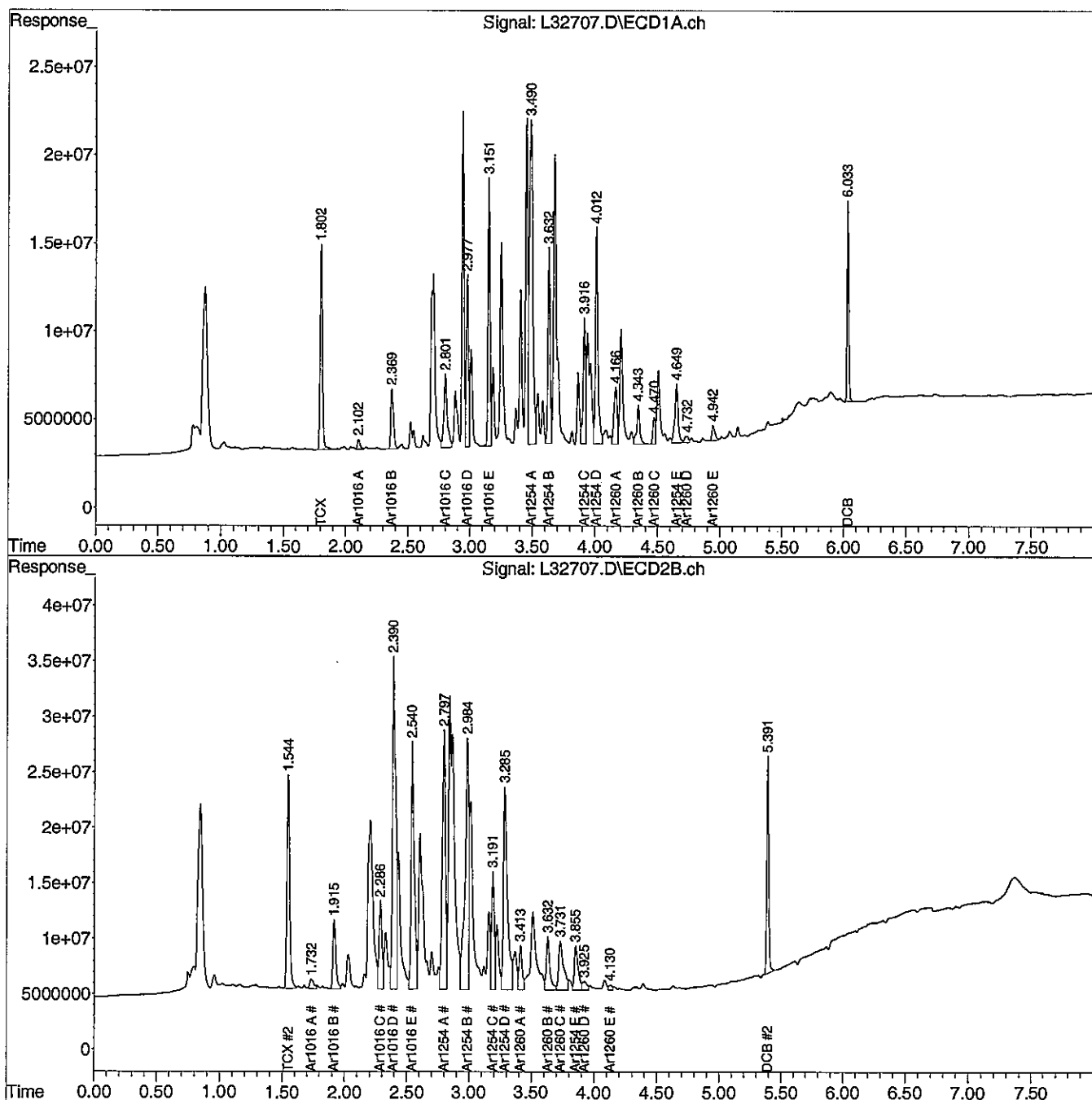
Comments: \_\_\_\_\_



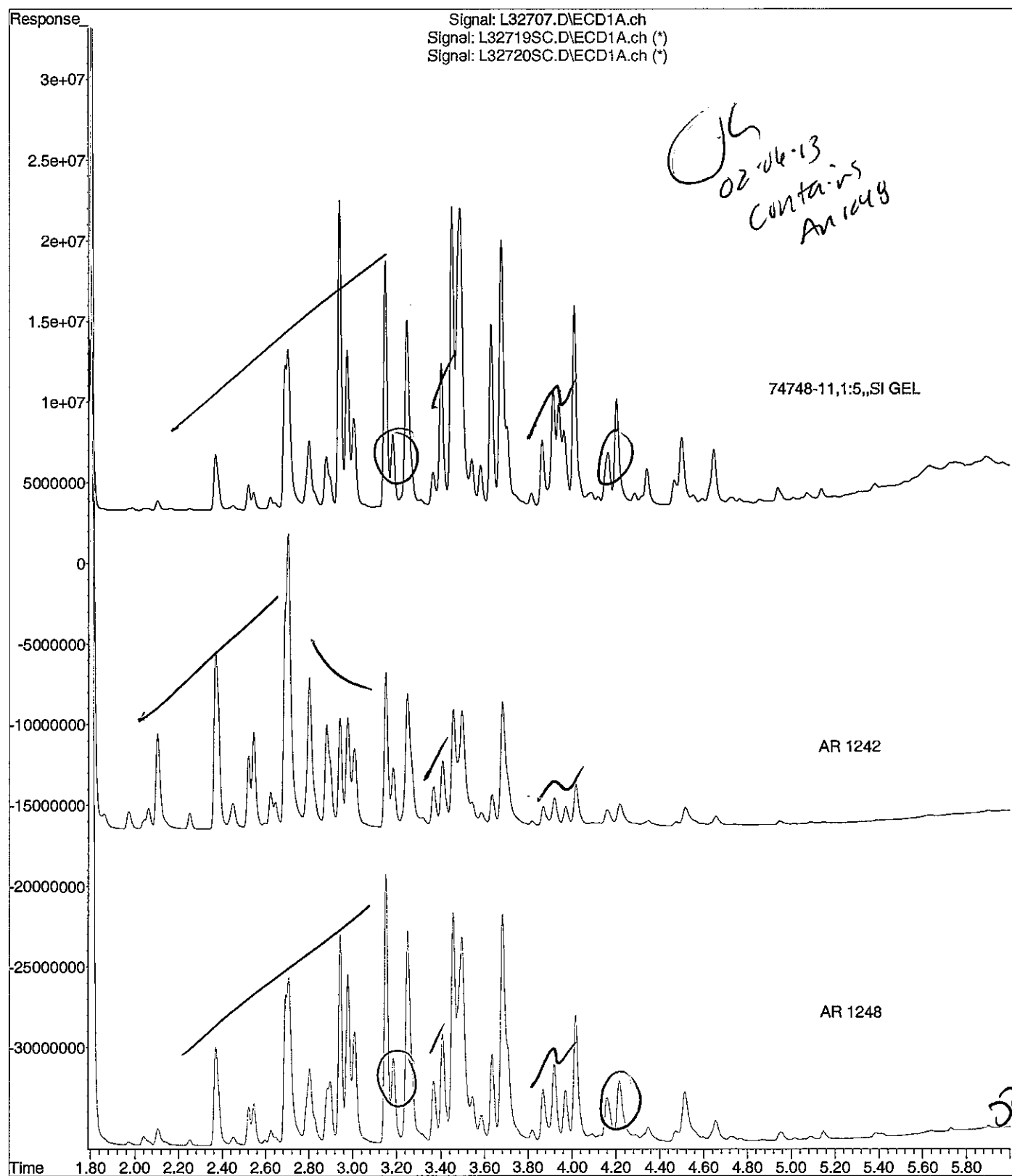
Data Path : C:\msdchem\1\DATA\020513-L\  
Data File : L32707.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 5 Feb 2013 4:32 pm  
Operator : JK  
Sample : 74748-11,1:5,,SI GEL  
Misc : SOIL  
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
Integration File signal 2: autoint2.e  
Quant Time: Feb 06 09:31:06 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Tue Feb 05 18:58:20 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32707.D  
Operator : JK  
Acquired : 5 Feb 2013 4:32 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-11,1:5,,SI GEL  
Misc Info : SOIL  
Vial Number: 19



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**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust

**Project Number:** 226334

**Field Sample ID:** HCT-CBK-036

**Lab Sample ID:** 74748-17

**Matrix:** Solid

**Percent Solid:** 100

**Dilution Factor:** 7810

**Collection Date:** 11/30/12

**Lab Receipt Date:** 01/29/13

**Extraction Date:** 01/30/13

**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	258000	U
PCB-1221	258000	U
PCB-1232	258000	U
PCB-1242	258000	U
PCB-1248	258000	U
PCB-1254	258000	4780000
PCB-1260	258000	U
PCB-1262	258000	U
PCB-1268	258000	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene \* %

Decachlorobiphenyl \* %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3665A.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-17,1:1000,,A/C
Column ID: 0.25 mm	Data File: L32713.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 7812.5
Column ID: 0.25 mm	

Column #1		Column #2			
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#	
PCB 1254	4326852	4776477	9.9		

# Column to be used to flag RPD values greater than QC limit of 40%

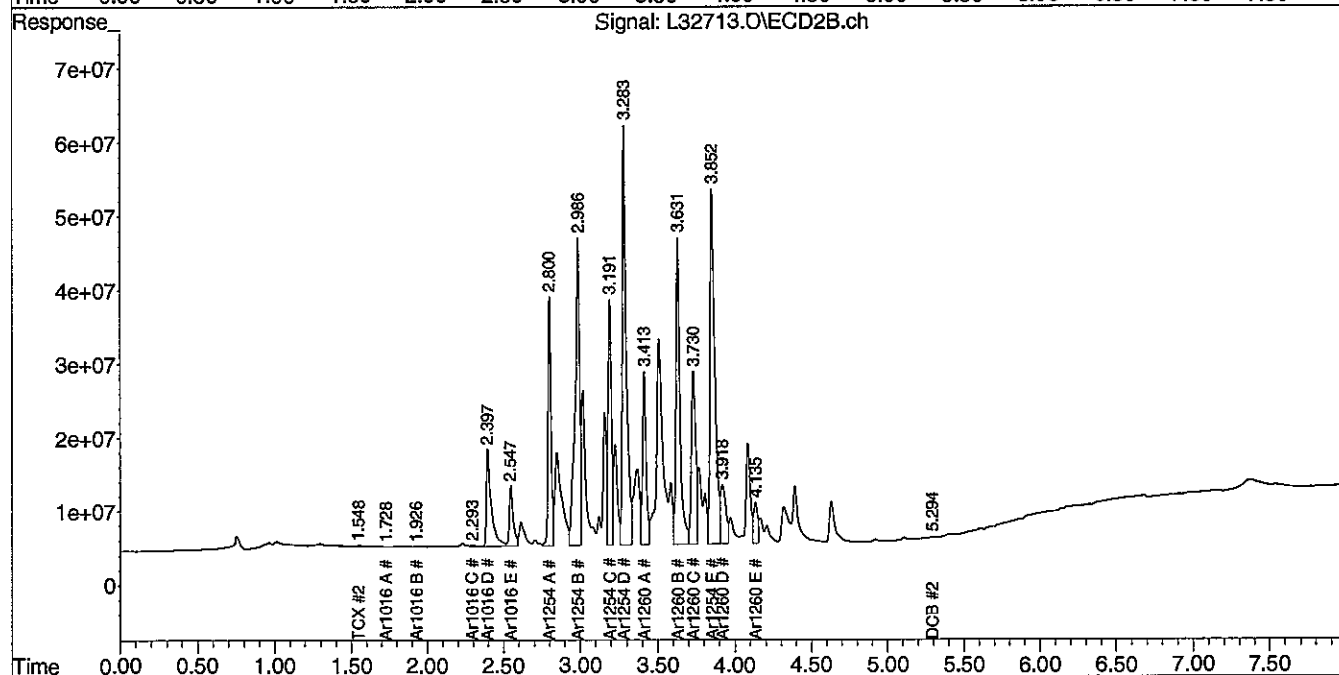
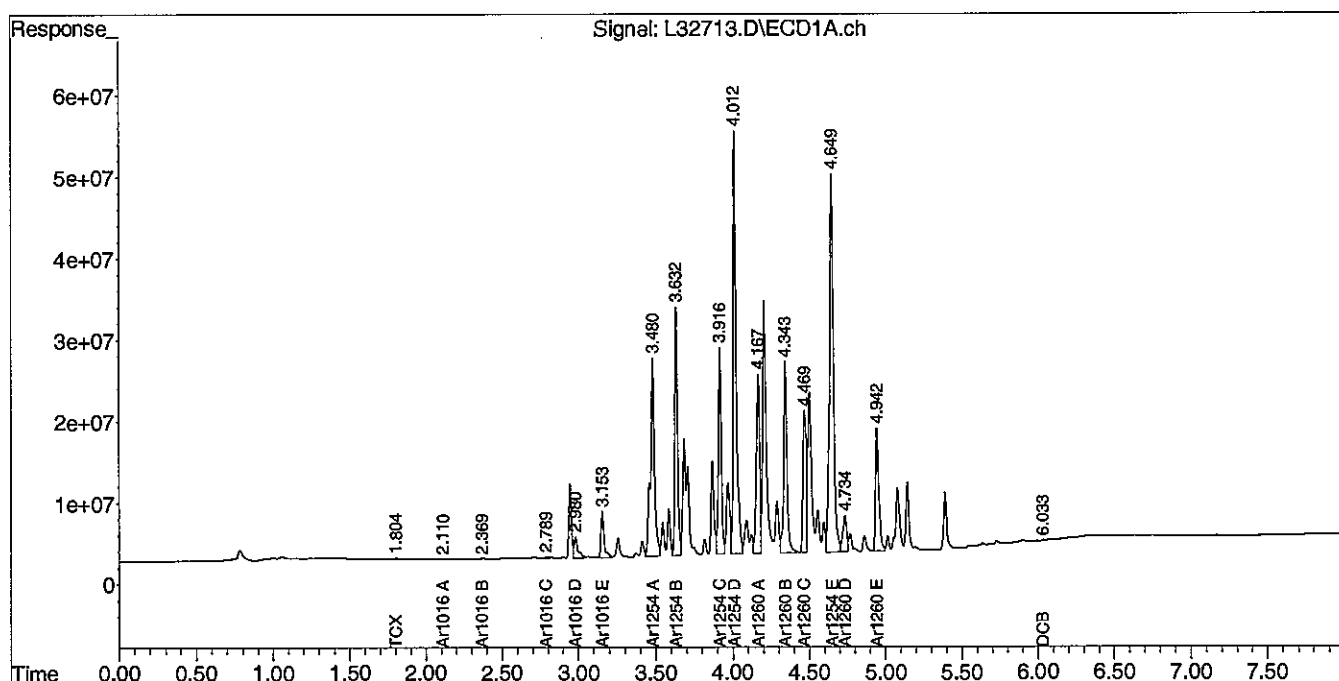
\* Values outside QC limits

Comments: \_\_\_\_\_

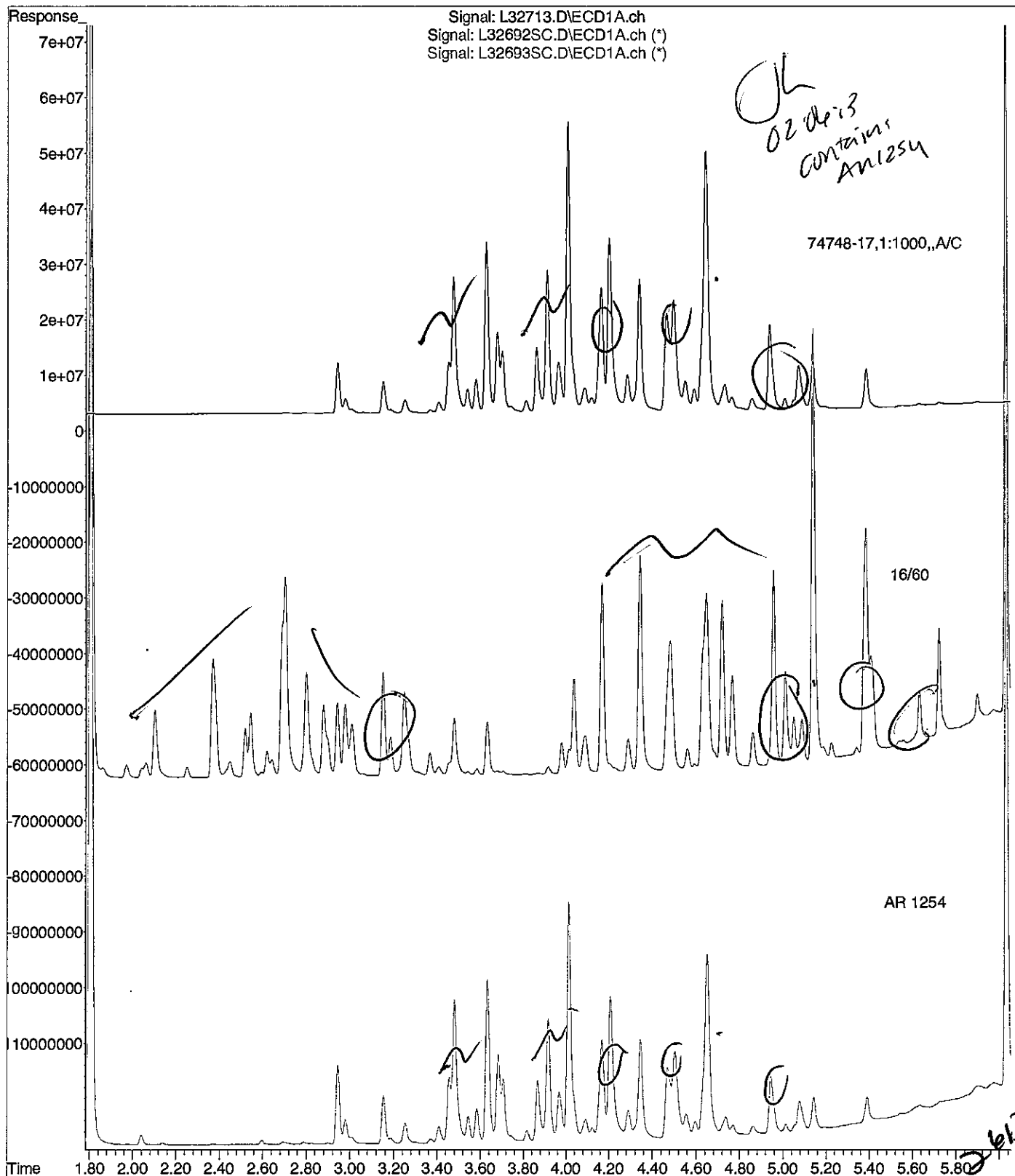
Data Path : C:\msdchem\1\DATA\020513-L\  
 Data File : L32713.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 5 Feb 2013 5:33 pm  
 Operator : JK  
 Sample : 74748-17,1:1000,,A/C  
 Misc : SOIL  
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
 Integration File signal 2: autoint2.e  
 Quant Time: Feb 06 09:31:18 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Tue Feb 05 18:58:20 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32713.D  
Operator : JK  
Acquired : 5 Feb 2013 5:33 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-17,1:1000,,A/C  
Misc Info : SOIL  
Vial Number: 25





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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-037

**Lab Sample ID:** 74748-18  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 97100  
**Collection Date:** 11/30/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	3204000	U
PCB-1221	3204000	U
PCB-1232	3204000	U
PCB-1242	3204000	U
PCB-1248	3204000	U
PCB-1254	3204000	54800000
PCB-1260	3204000	U
PCB-1262	3204000	U
PCB-1268	3204000	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3665A.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature 

PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-18,1:10000,,A/C

Column ID: 0.25 mm

Data File: L32714.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 97087.4

Column ID: 0.25 mm

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	49619942	54785961	9.9	

# Column to be used to flag RPD values greater than QC limit of 40%

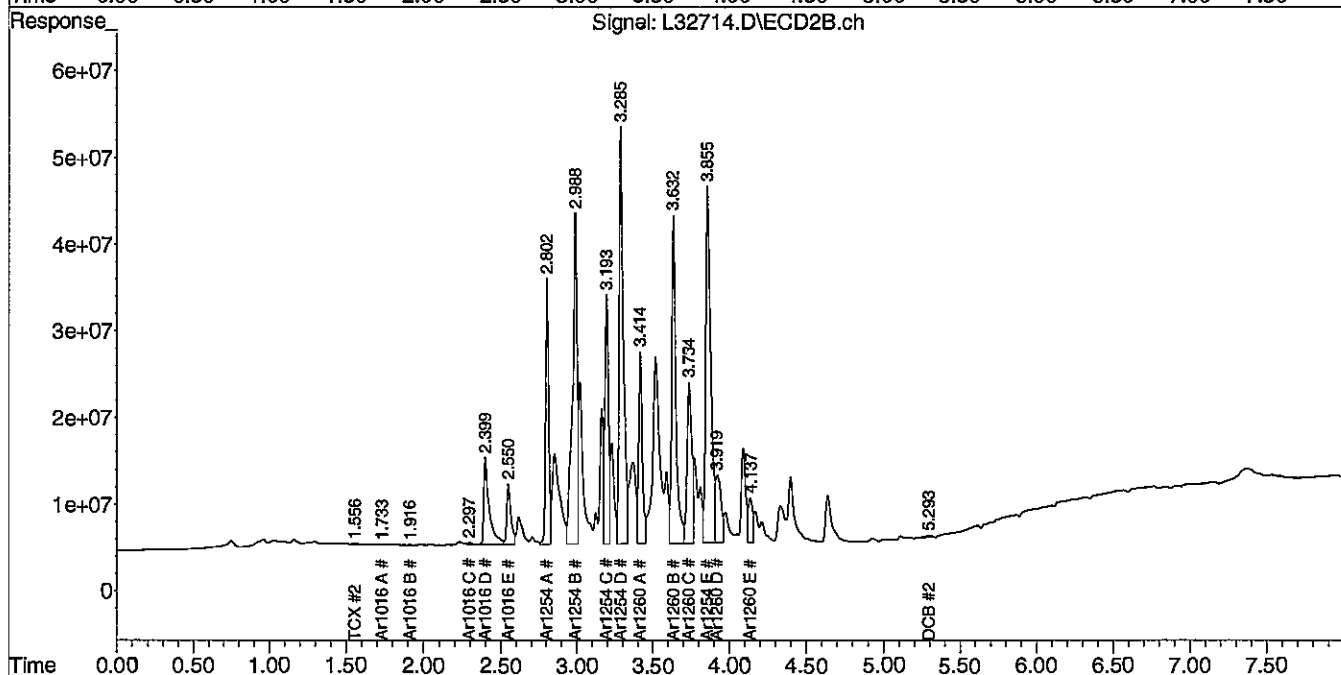
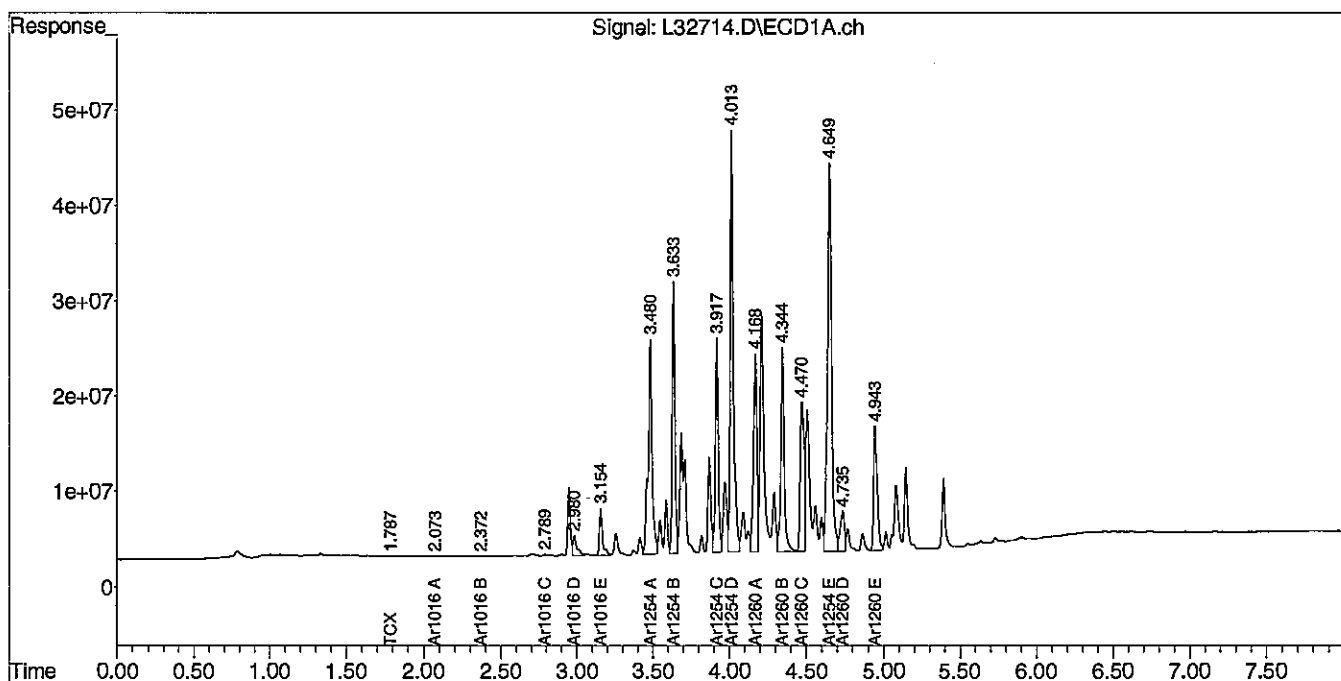
\* Values outside QC limits

Comments: \_\_\_\_\_

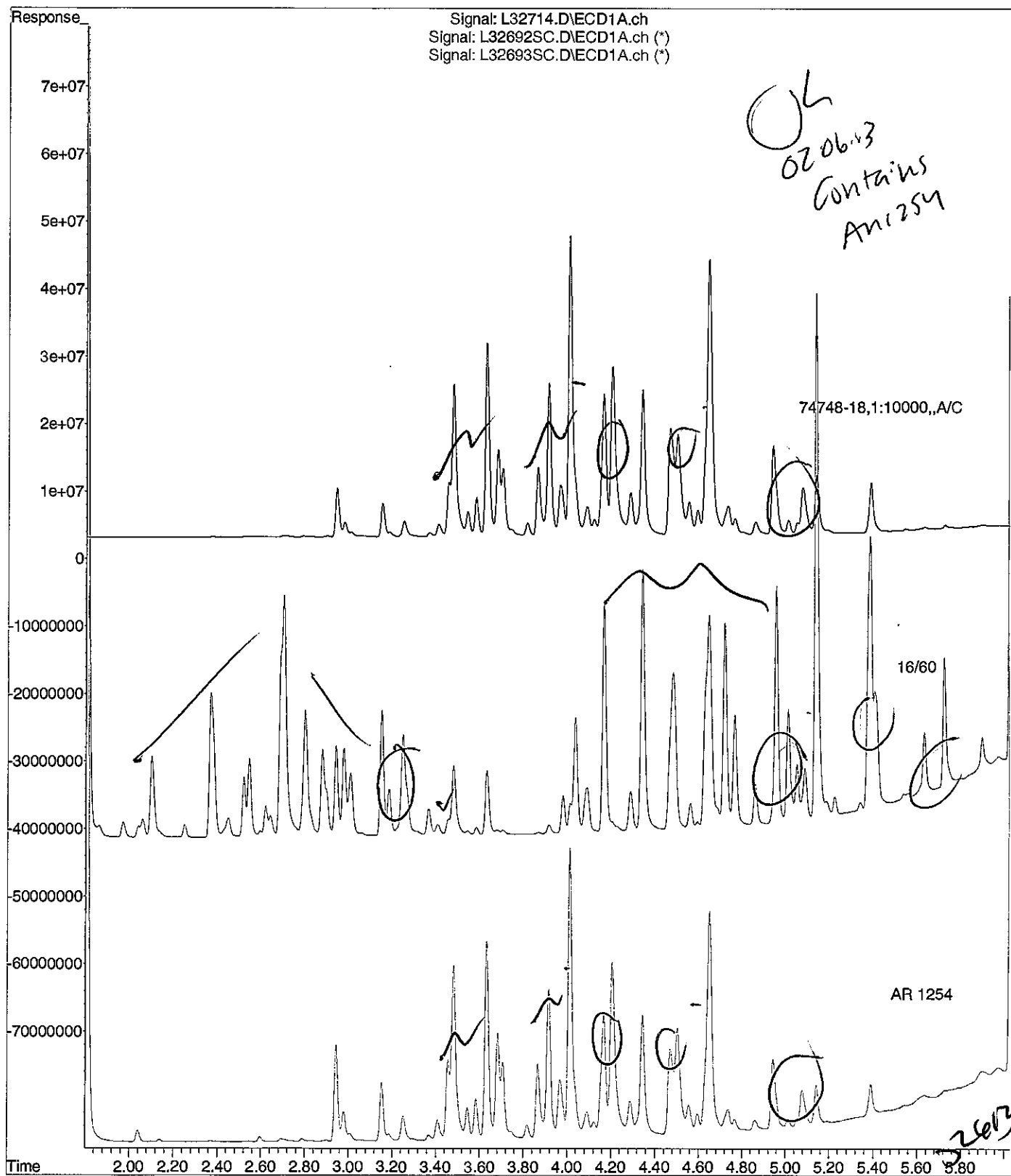
Data Path : C:\msdchem\1\DATA\020513-L\  
Data File : L32714.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 5 Feb 2013 5:42 pm  
Operator : JK  
Sample : 74748-18,1:10000,,A/C  
Misc : SOIL  
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
Integration File signal 2: autoint2.e  
Quant Time: Feb 06 09:31:20 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Tue Feb 05 18:58:20 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32714.D  
Operator : JK  
Acquired : 5 Feb 2013 5:42 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-18,1:10000,,A/C  
Misc Info : SOIL  
Vial Number: 26



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-038

**Lab Sample ID:** 74748-19  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 299  
**Collection Date:** 11/30/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/05/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	9870	U
PCB-1221	9870	U
PCB-1232	9870	U
PCB-1242	9870	U
PCB-1248	9870	U
PCB-1254	9870	31200
PCB-1260	9870	U
PCB-1262	9870	U
PCB-1268	9870	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-19,1:20,,SI GEL
Column ID: 0.25 mm	Data File: L32715.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 298.5
Column ID: 0.25 mm	

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	26302	31222	17.1	

# Column to be used to flag RPD values greater than QC limit of 40%

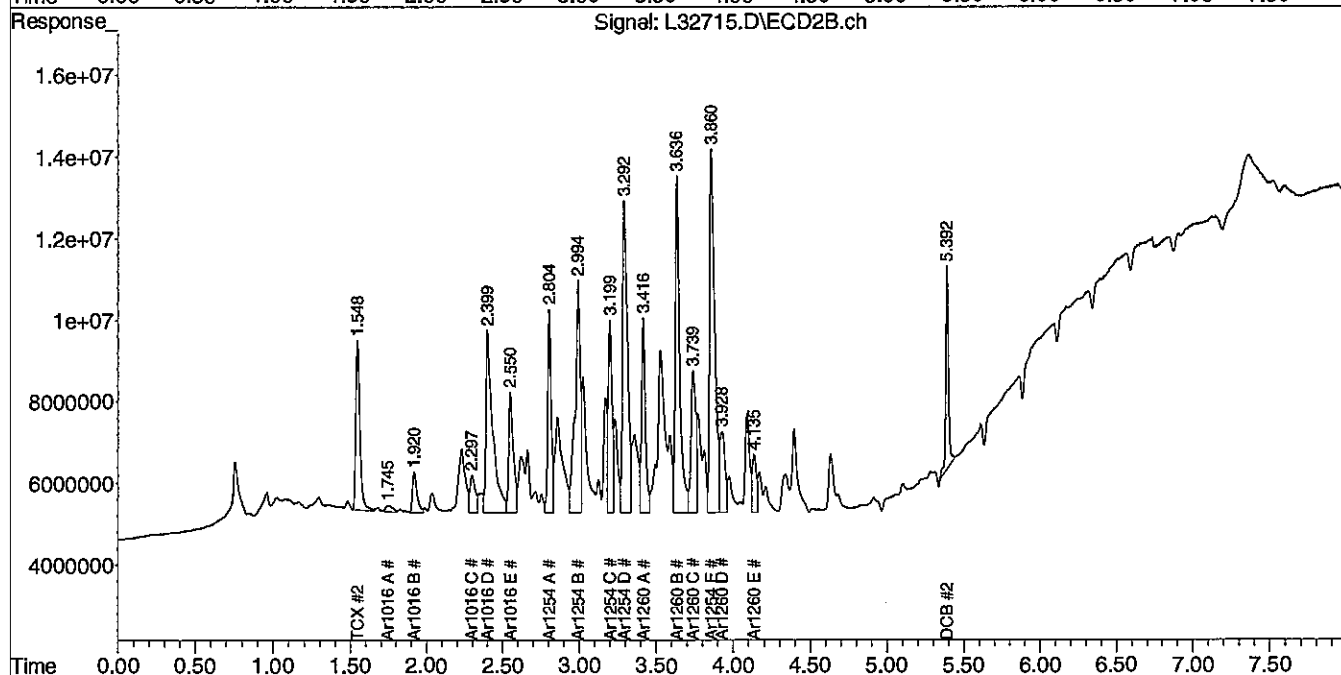
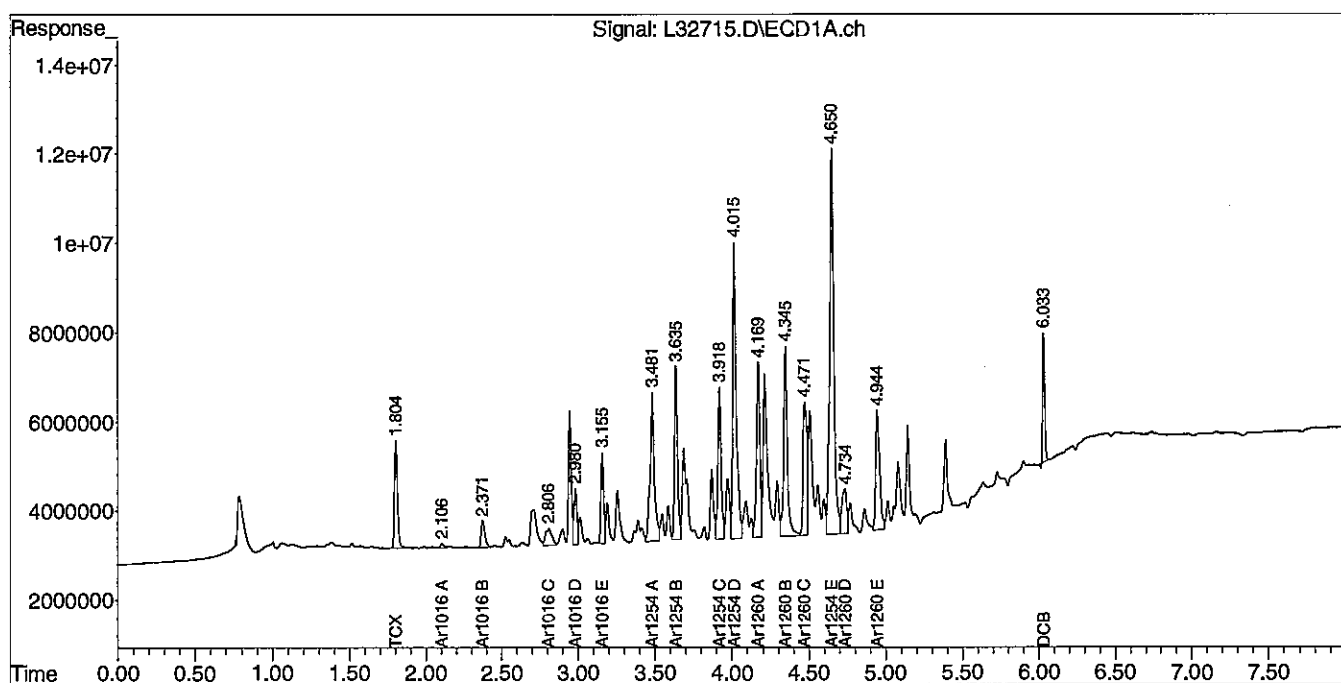
\* Values outside QC limits

Comments: \_\_\_\_\_

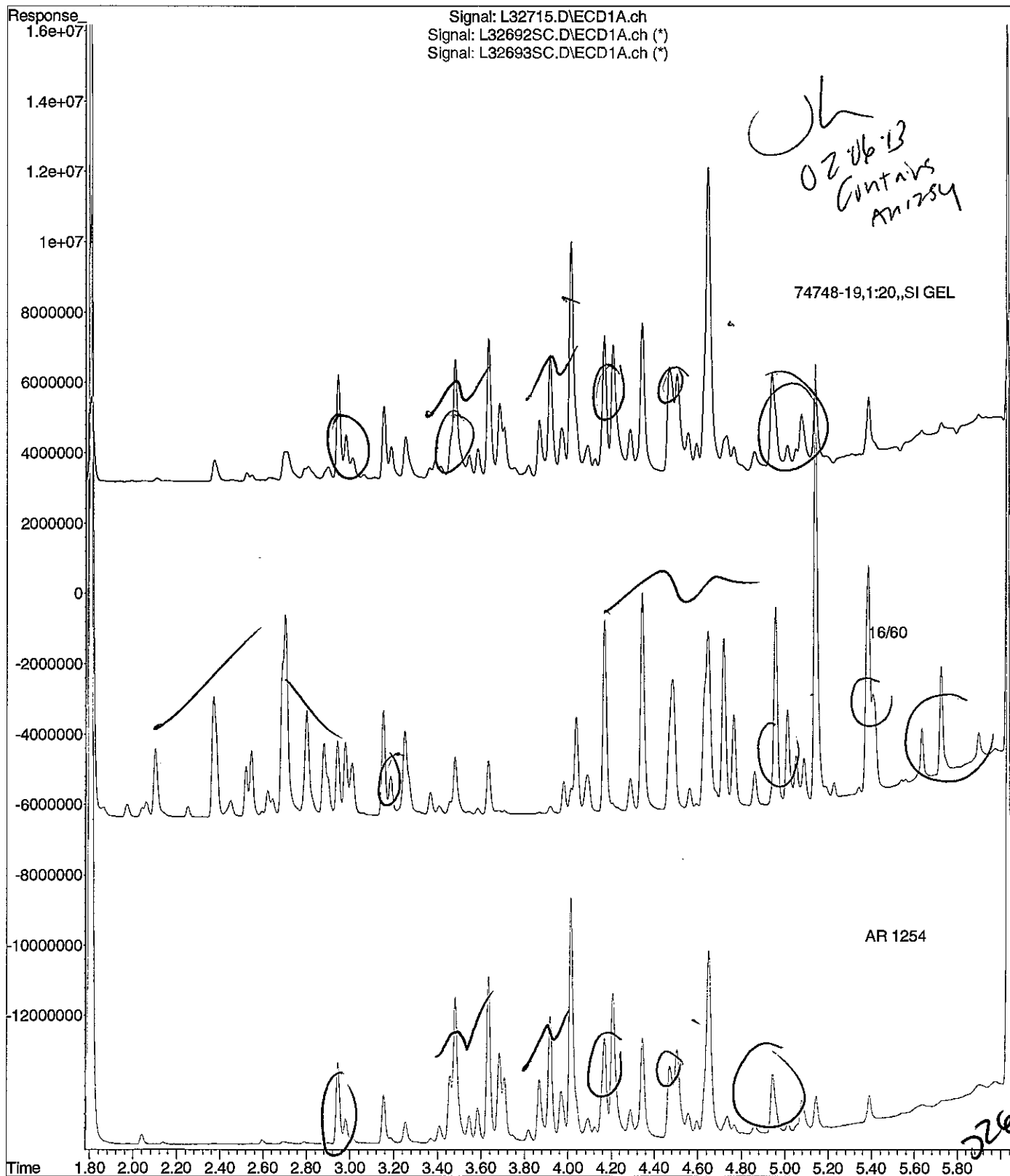
Data Path : C:\msdchem\1\DATA\020513-L\  
 Data File : L32715.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 5 Feb 2013 5:52 pm  
 Operator : JK  
 Sample : 74748-19,1:20,,SI GEL  
 Misc : SOIL  
 ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e  
 Integration File signal 2: autoint2.e  
 Quant Time: Feb 06 09:31:22 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020413.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Tue Feb 05 18:58:20 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020513-L\L32715.D  
Operator : JK  
Acquired : 5 Feb 2013 5:52 pm using AcqMethod PCB.M  
Instrument : Inst L  
Sample Name: 74748-19,1:20,,SI GEL  
Misc Info : SOIL  
Vial Number: 27





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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-039

**Lab Sample ID:** 74748-20  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 108000  
**Collection Date:** 11/30/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/30/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	3564000	U
PCB-1221	3564000	U
PCB-1232	3564000	U
PCB-1242	3564000	U
PCB-1248	3564000	U
PCB-1254	3564000	70100000
PCB-1260	3564000	U
PCB-1262	3564000	U
PCB-1268	3564000	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene \* %  
Decachlorobiphenyl \* %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3665A.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-20,1:20000,,A/C

Column ID: 0.25 mm

Data File: M66749.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 107526.9

Column ID: 0.25 mm

COMPOUND	Column #1	Column #2		
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	69879677	70113699	0.3	

# Column to be used to flag RPD values greater than QC limit of 40%

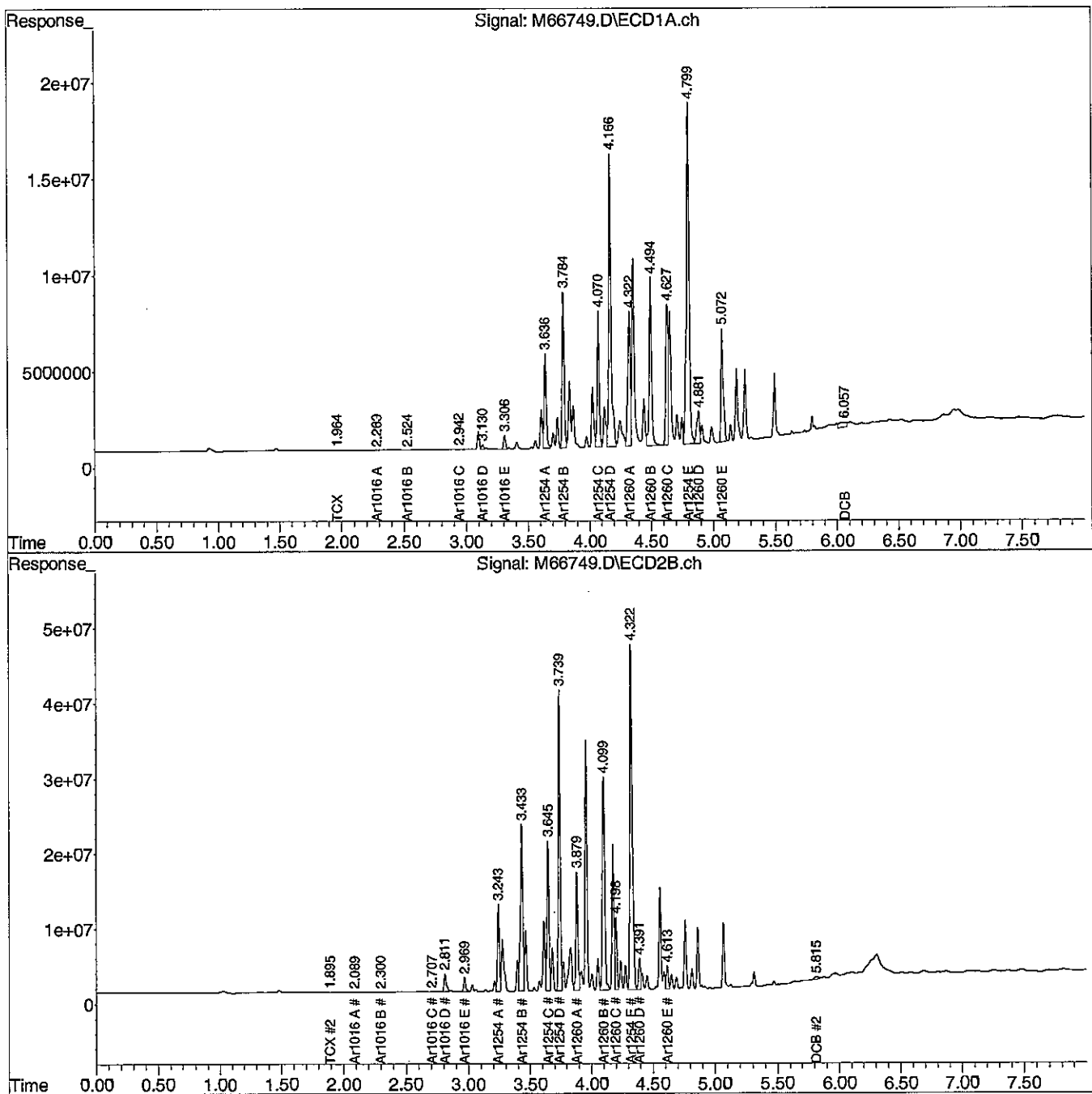
\* Values outside QC limits

Comments: \_\_\_\_\_

Data Path : C:\msdchem\1\DATA\020613-M\  
 Data File : M66749.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 6 Feb 2013 11:45 am  
 Operator : JK  
 Sample : 74748-20,1:20000,,A/C  
 Misc : SOIL  
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Feb 06 12:42:23 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Wed Feb 06 08:43:45 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-040

**Lab Sample ID:** 74748-21  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 307  
**Collection Date:** 11/30/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/31/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	10100	U
PCB-1221	10100	U
PCB-1232	10100	U
PCB-1242	10100	U
PCB-1248	10100	U
PCB-1254	10100	116000
PCB-1260	10100	U
PCB-1262	10100	U
PCB-1268	10100	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene \* %  
Decachlorobiphenyl \* %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3665A.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-21,1:50,,A/C

Column ID: 0.25 mm

Data File: M66750.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 306.7

Column ID: 0.25 mm

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	107913	115543	6.8	

# Column to be used to flag RPD values greater than QC limit of 40%

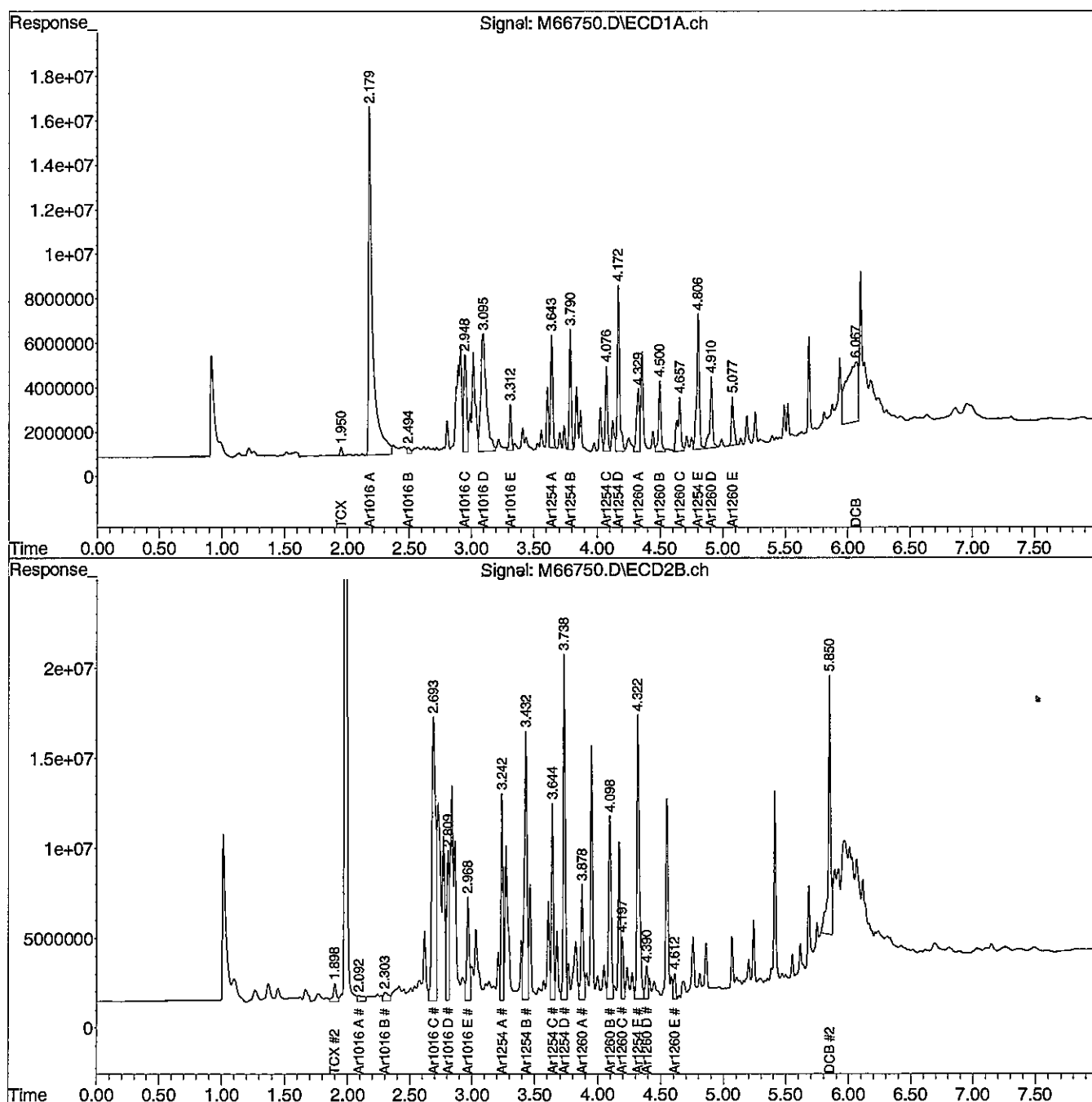
\* Values outside QC limits

Comments: \_\_\_\_\_

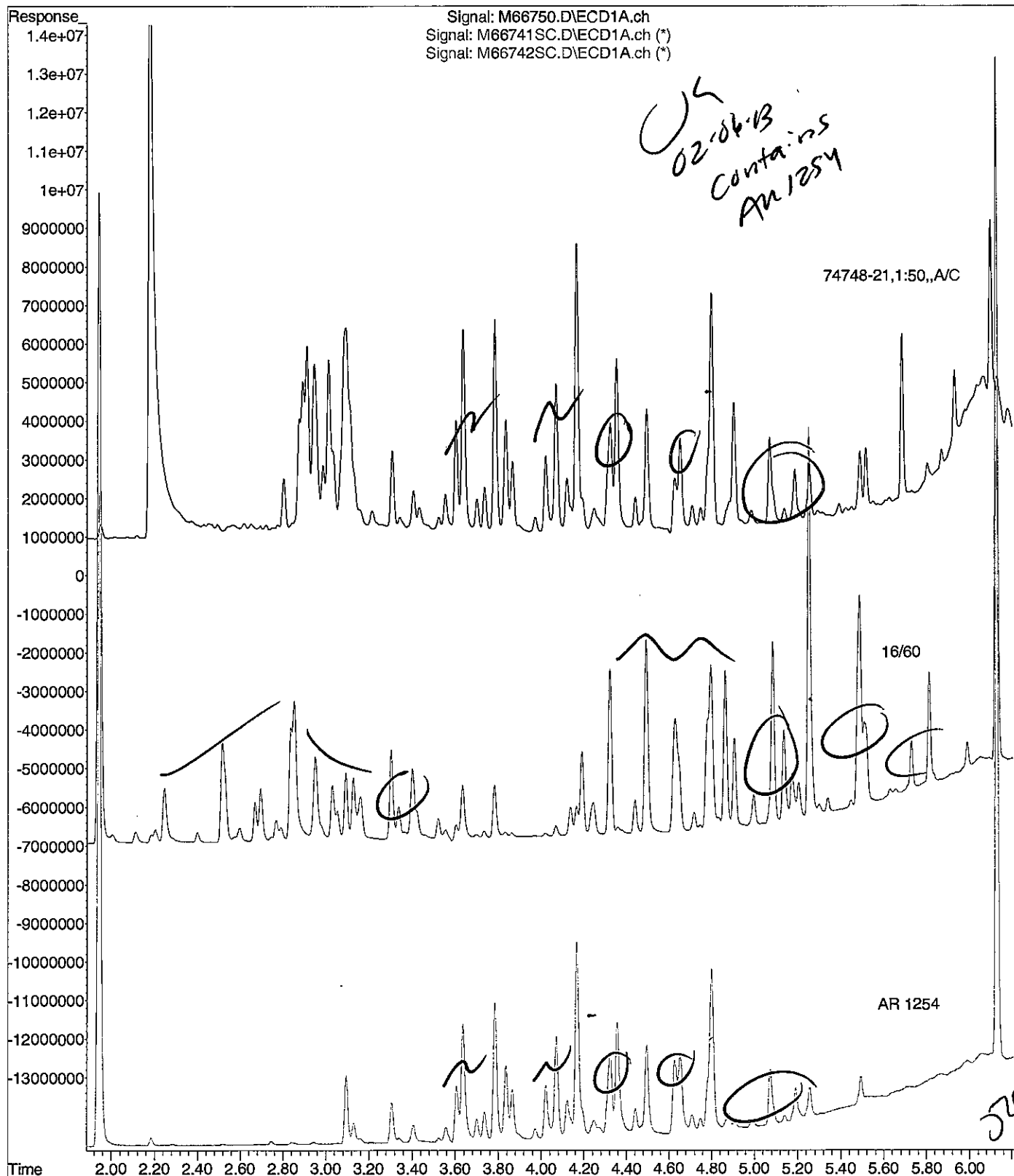
Data Path : C:\msdchem\1\DATA\020613-M\  
 Data File : M66750.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 6 Feb 2013 11:58 am  
 Operator : JK  
 Sample : 74748-21,1:50,,A/C  
 Misc : SOIL  
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Feb 06 12:42:25 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Wed Feb 06 08:43:45 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020613-M\M66750.D  
Operator : JK  
Acquired : 6 Feb 2013 11:58 am using AcqMethod PCB.M  
Instrument : Instrument M  
Sample Name: 74748-21,1:50,,A/C  
Misc Info : SOIL  
Vial Number: 13



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**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust

**Project Number:** 226334

**Field Sample ID:** HCT-CBK-041

**Lab Sample ID:** 74748-22

**Matrix:** Solid

**Percent Solid:** 98

**Dilution Factor:** 80200

**Collection Date:** 12/05/12

**Lab Receipt Date:** 01/29/13

**Extraction Date:** 01/31/13

**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	2647000	U
PCB-1221	2647000	U
PCB-1232	2647000	U
PCB-1242	2647000	U
PCB-1248	2647000	U
PCB-1254	2647000	67000000
PCB-1260	2647000	U
PCB-1262	2647000	U
PCB-1268	2647000	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene \* %

Decachlorobiphenyl \* %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3665A.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature





PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-22,1:10000,,A/C
Column ID: 0.25 mm	Data File: M66751.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 80224.3
Column ID: 0.25 mm	

COMPOUND	Column #1	Column #2	RPD		#
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	66391310	66990425	0.9		

# Column to be used to flag RPD values greater than QC limit of 40%

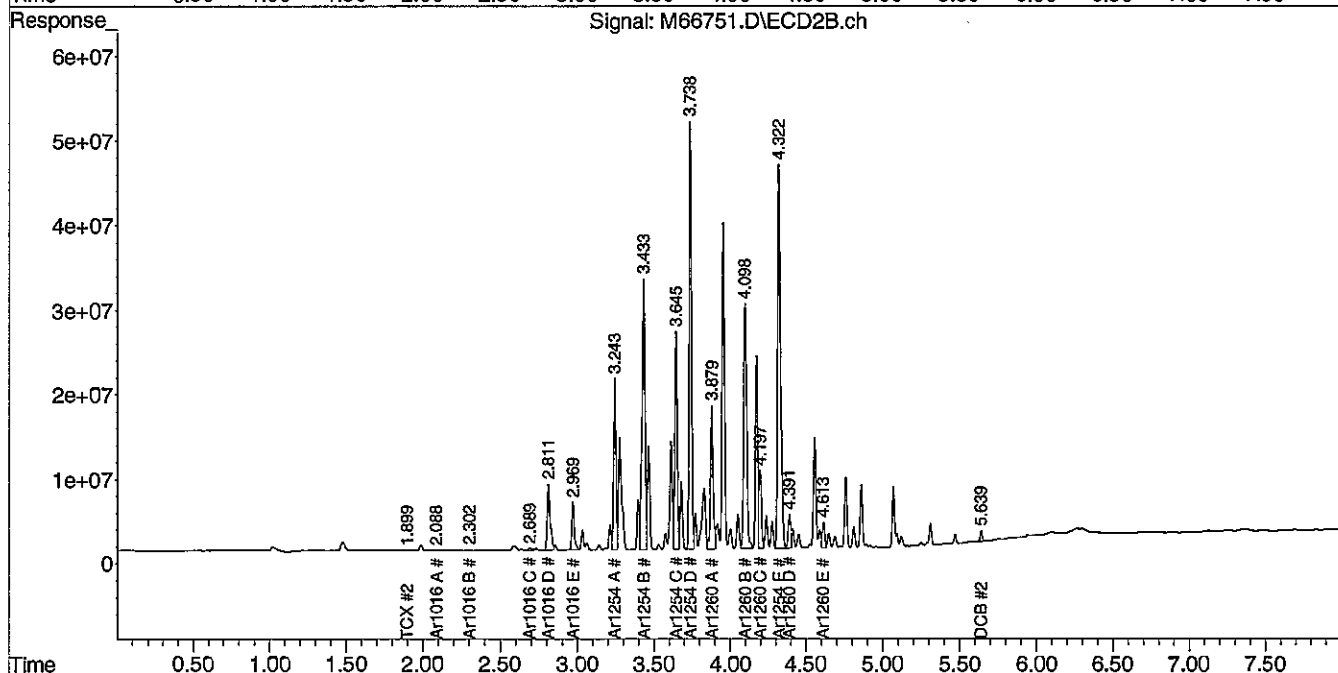
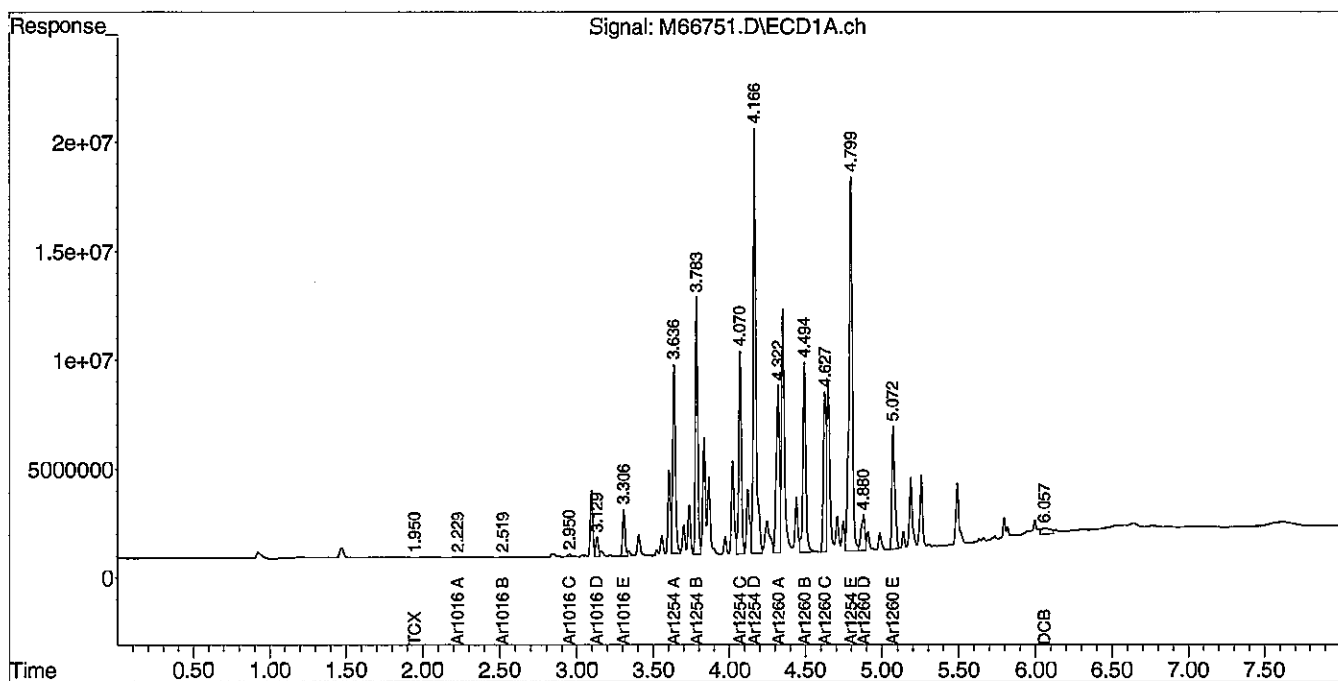
\* Values outside QC limits

Comments: \_\_\_\_\_

Data Path : C:\msdchem\1\DATA\020613-M\  
Data File : M66751.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 6 Feb 2013 12:08 pm  
Operator : JK  
Sample : 74748-22,1:10000,,A/C  
Misc : SOIL  
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Feb 06 12:42:27 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Wed Feb 06 08:43:45 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-042

**Lab Sample ID:** 74748-23  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 400  
**Collection Date:** 12/05/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/31/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	13200	U
PCB-1221	13200	U
PCB-1232	13200	U
PCB-1242	13200	U
PCB-1248	13200	U
PCB-1254	13200	71400
PCB-1260	13200	U
PCB-1262	13200	U
PCB-1268	13200	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene \* %  
Decachlorobiphenyl \* %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-23,1:50,,SI GEL
Column ID: 0.25 mm	Data File: M66752.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 400.0
Column ID: 0.25 mm	

Column #1		Column #2		RPD	#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)			
PCB 1254	68211	71446		4.6	

# Column to be used to flag RPD values greater than QC limit of 40%

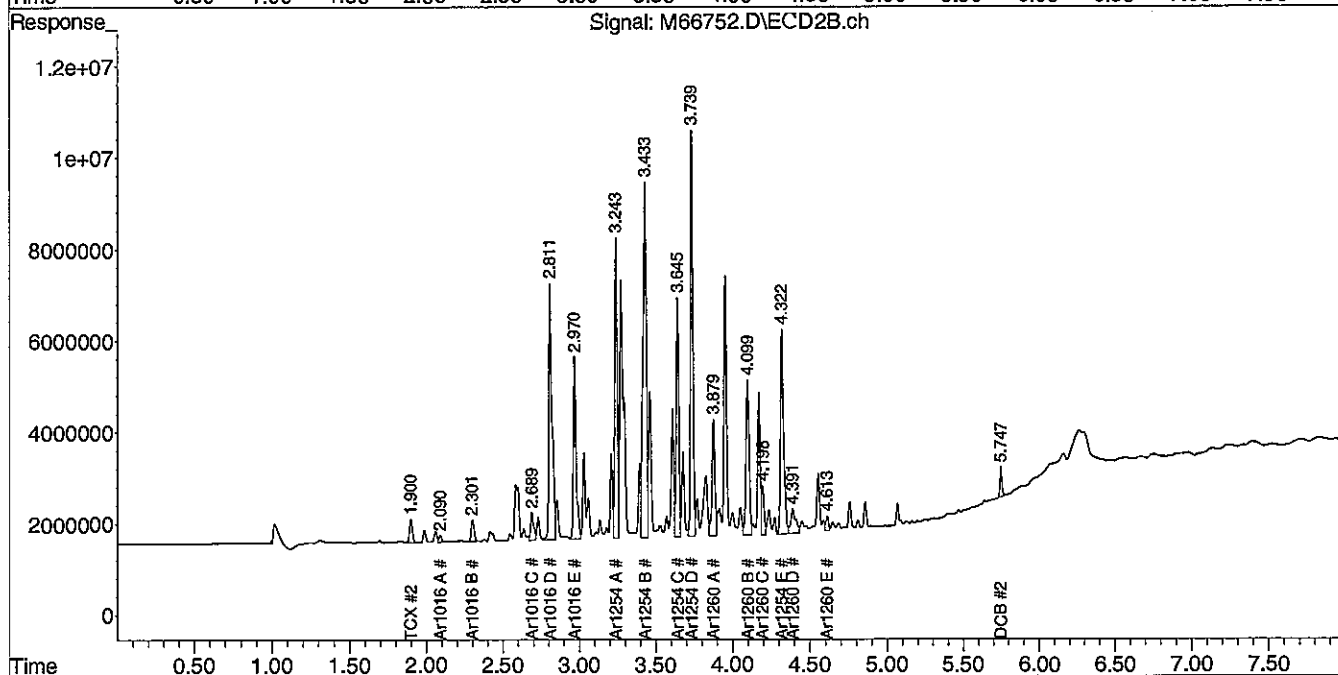
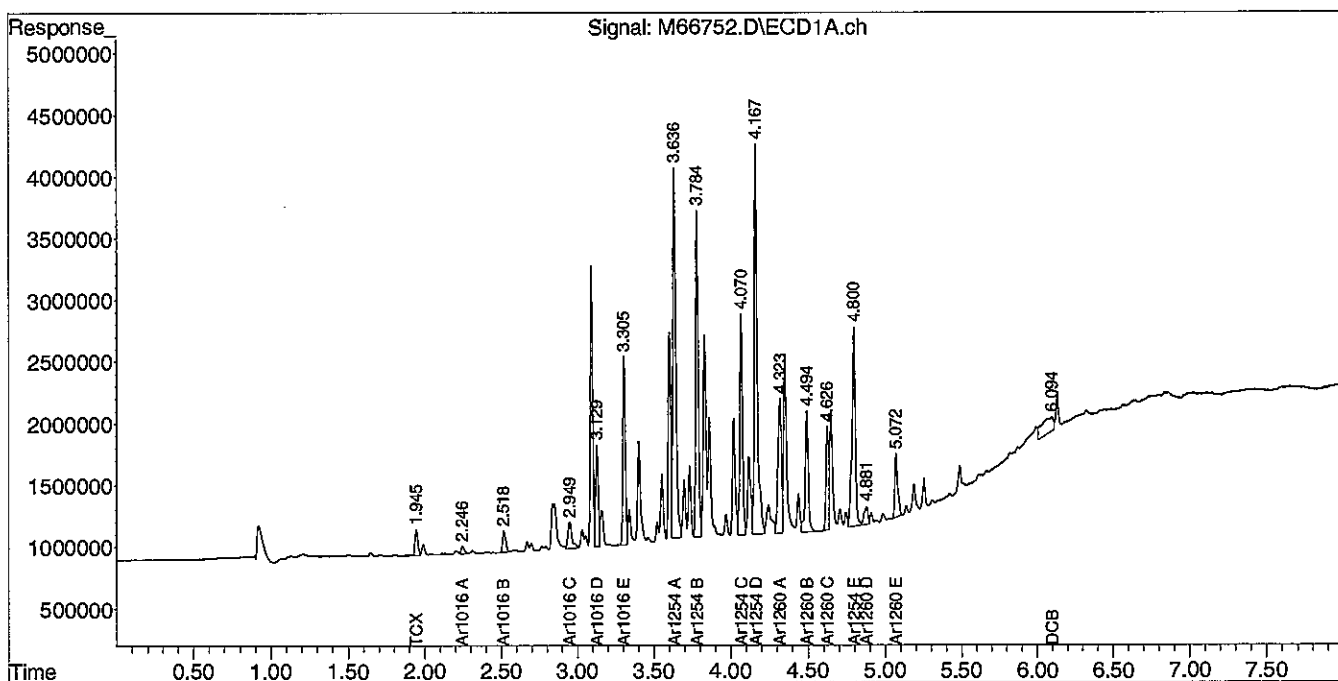
\* Values outside QC limits

Comments: \_\_\_\_\_

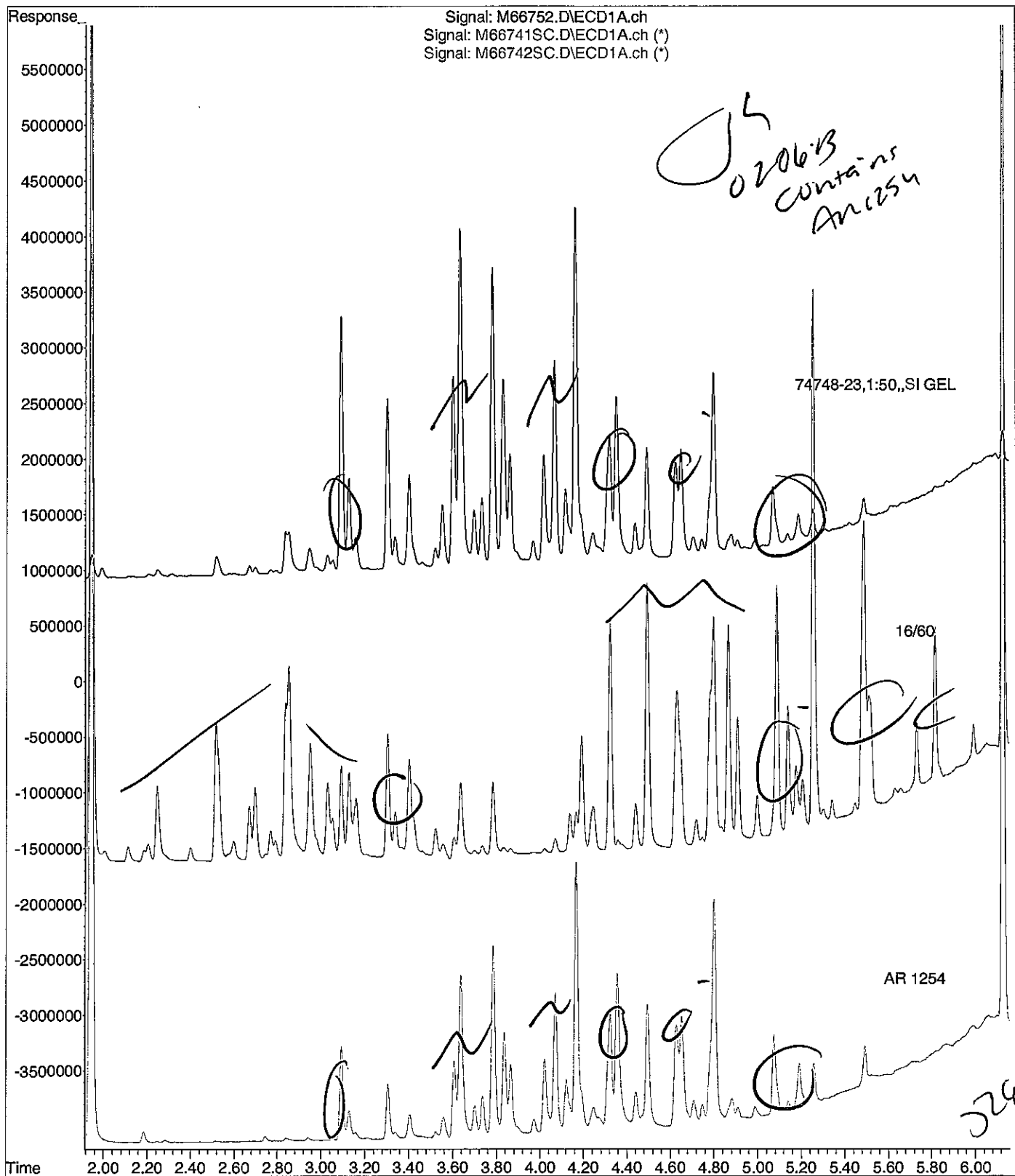
Data Path : C:\msdchem\1\DATA\020613-M\  
Data File : M66752.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 6 Feb 2013 12:18 pm  
Operator : JK  
Sample : 74748-23,1:50,,SI GEL  
Misc : SOIL  
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Feb 06 12:42:29 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Wed Feb 06 08:43:45 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020613-M\M66752.D  
Operator : JK  
Acquired : 6 Feb 2013 12:18 pm using AcqMethod PCB.M  
Instrument : Instrument M  
Sample Name: 74748-23,1:50,,SI GEL  
Misc Info : SOIL  
Vial Number: 15



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust

**Project Number:** 226334

**Field Sample ID:** HCT-CBK-043

**Lab Sample ID:** 74748-24

**Matrix:** Solid

**Percent Solid:** 100

**Dilution Factor:** 52

**Collection Date:** 12/05/12

**Lab Receipt Date:** 01/29/13

**Extraction Date:** 01/31/13

**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	1720	U
PCB-1221	1720	U
PCB-1232	1720	U
PCB-1242	1720	U
PCB-1248	1720	U
PCB-1254	1720	8560
PCB-1260	1720	U
PCB-1262	1720	U
PCB-1268	1720	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	78	%
Decachlorobiphenyl	81	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-24,1:10,,SI GEL
Column ID: 0.25 mm	Data File: M66753.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 52.1
Column ID: 0.25 mm	

COMPOUND	Column #1	Column #2		
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	8449	8564	1.4	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

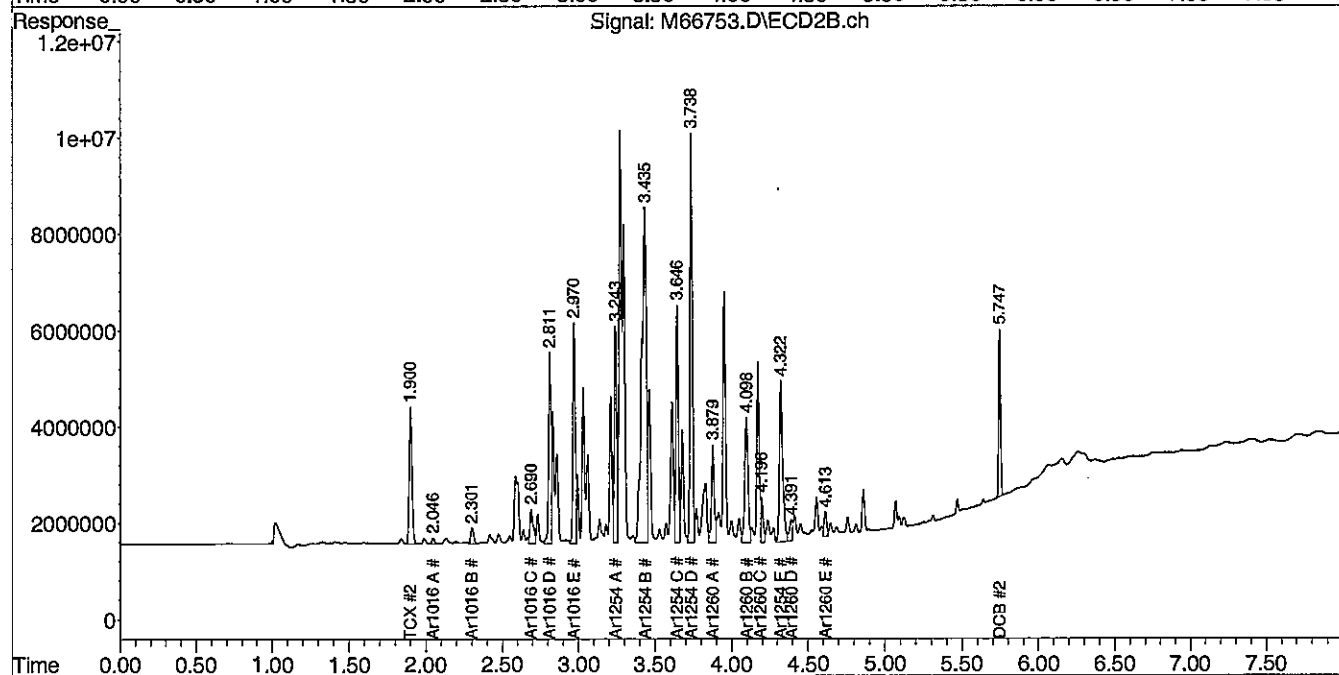
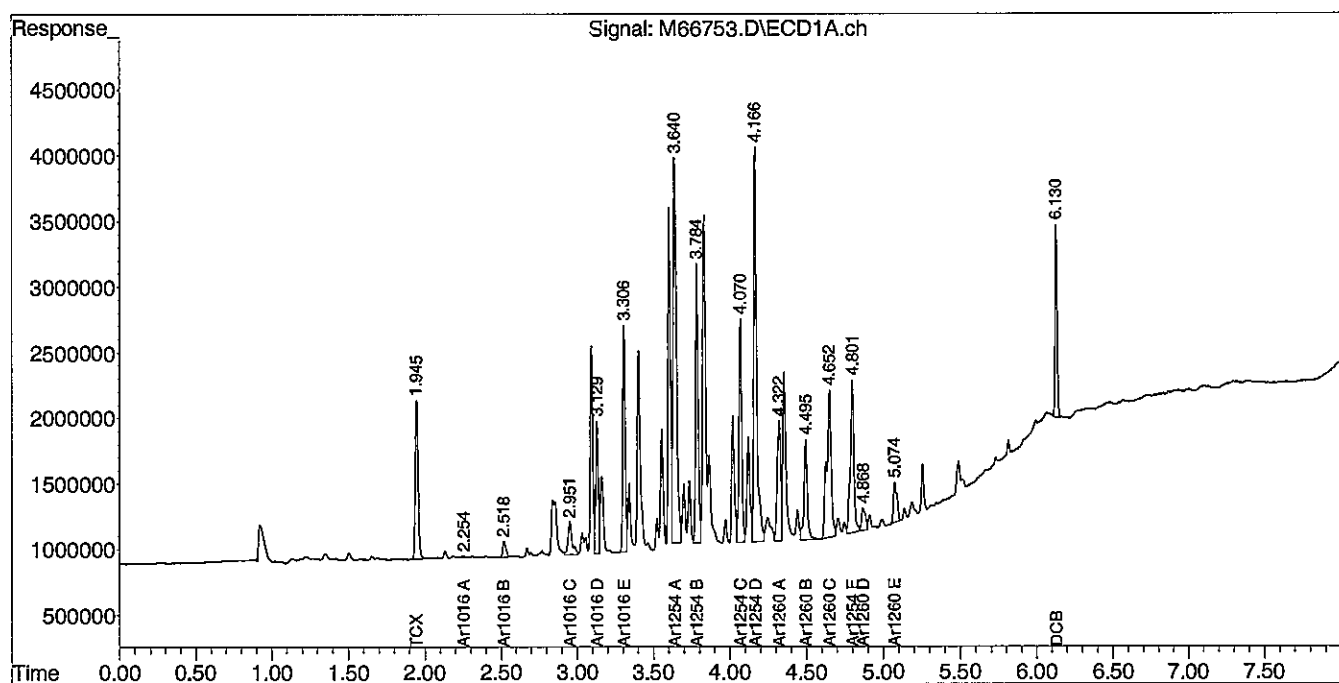
Comments: \_\_\_\_\_



Data Path : C:\msdchem\1\DATA\020613-M\  
Data File : M66753.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 6 Feb 2013 12:28 pm  
Operator : JK  
Sample : 74748-24,1:10,,SI GEL  
Misc : SOIL  
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Feb 06 12:55:12 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Wed Feb 06 08:43:45 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-044

**Lab Sample ID:** 74748-25  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 114  
**Collection Date:** 12/05/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/31/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	3760	U
PCB-1221	3760	U
PCB-1232	3760	U
PCB-1242	3760	U
PCB-1248	3760	U
PCB-1254	3760	<b>7950</b>
PCB-1260	3760	U
PCB-1262	3760	U
PCB-1268	3760	U

**Surrogate Standard Recovery**

2,4,5,6-Tetrachloro-m-xylene 65 %  
Decachlorobiphenyl 69 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-25,1:5,,SI GEL
Column ID: 0.25 mm	Data File: M66754.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 113.6
Column ID: 0.25 mm	

COMPOUND	Column #1	Column #2		
	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	6983	7951	13.0	

# Column to be used to flag RPD values greater than QC limit of 40%

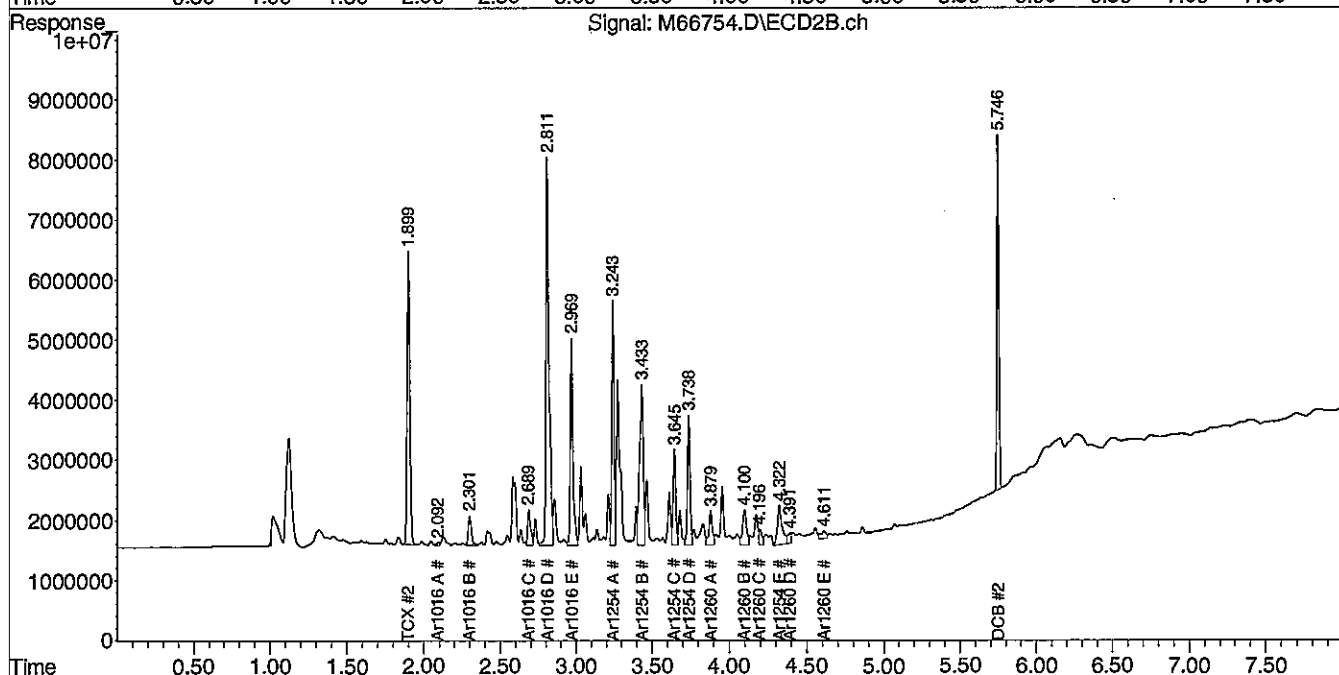
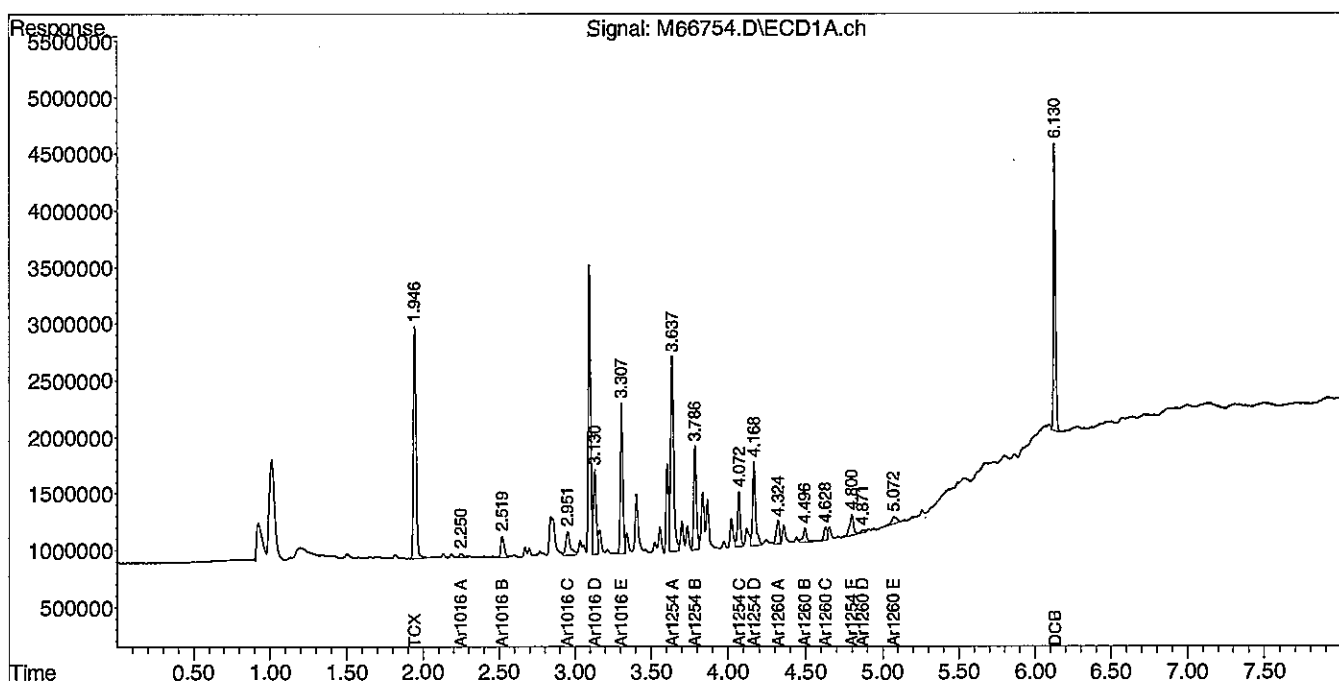
\* Values outside QC limits

Comments: \_\_\_\_\_

Data Path : C:\msdchem\1\DATA\020613-M\  
 Data File : M66754.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 6 Feb 2013 12:39 pm  
 Operator : JK  
 Sample : 74748-25,1:5,,SI GEL  
 Misc : SOIL  
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Feb 06 12:55:58 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Wed Feb 06 08:43:45 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



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February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-045

**Lab Sample ID:** 74748-26  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 145  
**Collection Date:** 12/05/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/31/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	4790	U
PCB-1221	4790	U
PCB-1232	4790	U
PCB-1242	4790	U
PCB-1248	4790	<b>10100</b>
PCB-1254	4790	U
PCB-1260	4790	U
PCB-1262	4790	U
PCB-1268	4790	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	69	%
Decachlorobiphenyl	73	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.

PCB EXT Report

Authorized signature



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-26,1:10,,SI GEL
Column ID: 0.25 mm	Data File: M66755.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 144.9
Column ID: 0.25 mm	

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1248	10405	10079	3.2

# Column to be used to flag RPD values greater than QC limit of 40%

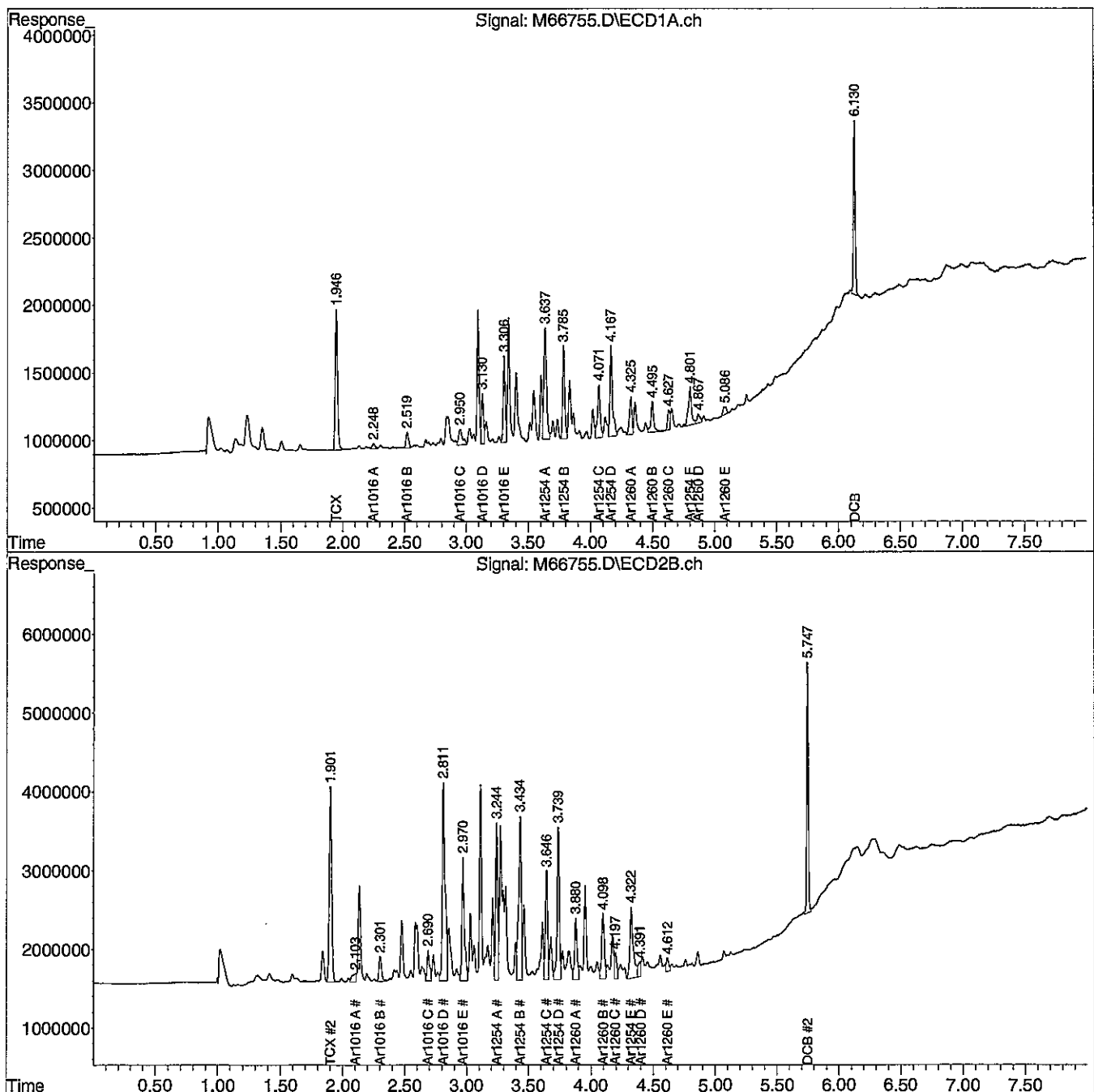
\* Values outside QC limits

Comments: \_\_\_\_\_

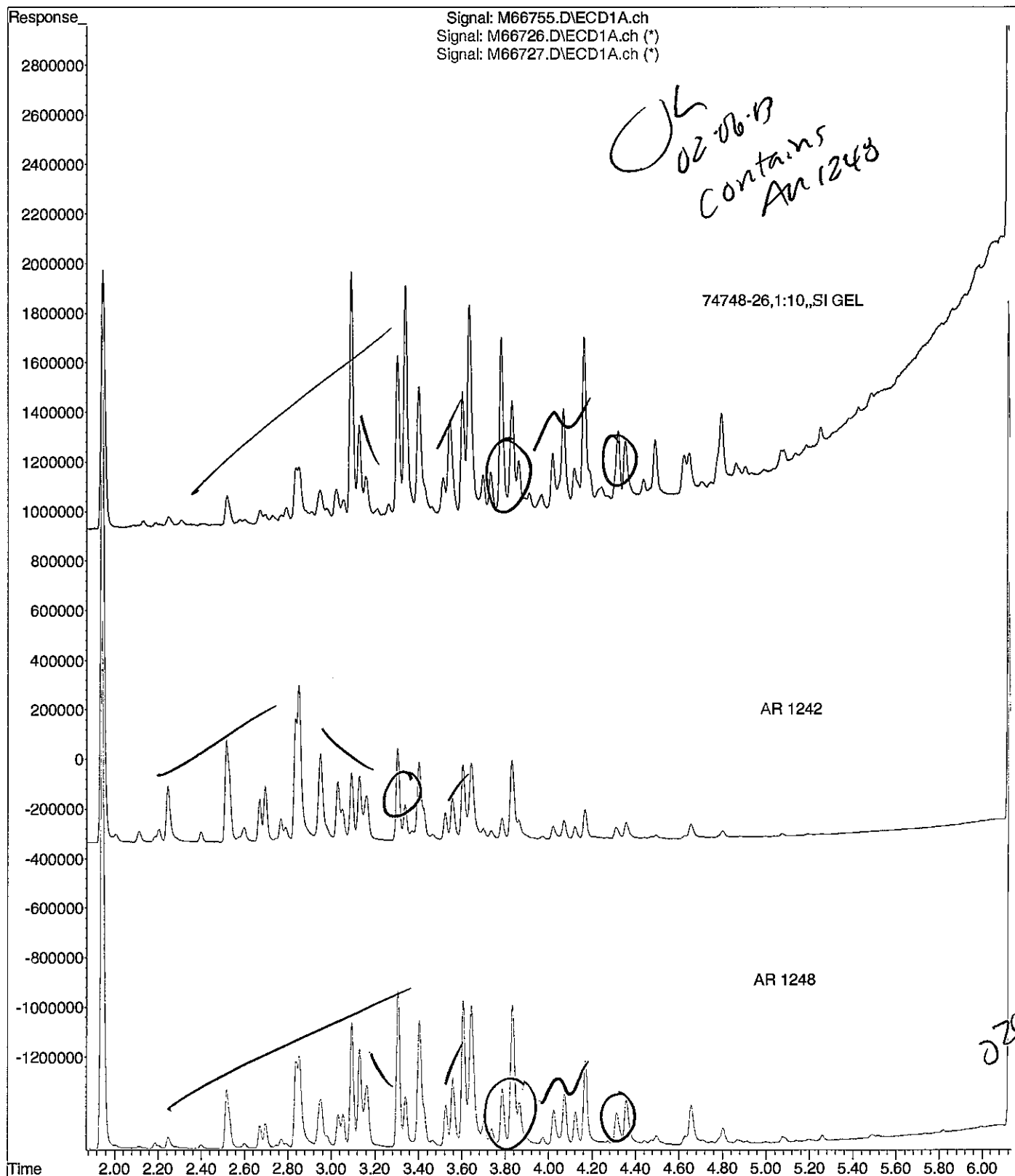
Data Path : C:\msdchem\1\DATA\020613-M\  
 Data File : M66755.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 6 Feb 2013 12:49 pm  
 Operator : JK  
 Sample : 74748-26,1:10,,SI GEL  
 Misc : SOIL  
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Feb 06 12:57:33 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Wed Feb 06 08:43:45 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020613-M\M66755.D  
Operator : JK  
Acquired : 6 Feb 2013 12:49 pm using AcqMethod PCB.M  
Instrument : Instrument M  
Sample Name: 74748-26,1:10,,SI GEL  
Misc Info : SOIL  
Vial Number: 18





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**SAMPLE DATA**
**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBK-046

**Lab Sample ID:** 74748-27  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 463  
**Collection Date:** 12/05/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/31/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit $\mu\text{g/kg}$	Results $\mu\text{g/kg}$
PCB-1016	15300	U
PCB-1221	15300	U
PCB-1232	15300	U
PCB-1242	15300	U
PCB-1248	15300	58000
PCB-1254	15300	U
PCB-1260	15300	U
PCB-1262	15300	U
PCB-1268	15300	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.  
\* The surrogates were diluted out.



PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 74748

GC Column #1: STX-CLPesticides I

Sample: 74748-27,1:50,,SI GEL

Column ID: 0.25 mm

Data File: M66756.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 463.0

Column ID: 0.25 mm

Column #1		Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1248	53547	57952	7.9

# Column to be used to flag RPD values greater than QC limit of 40%

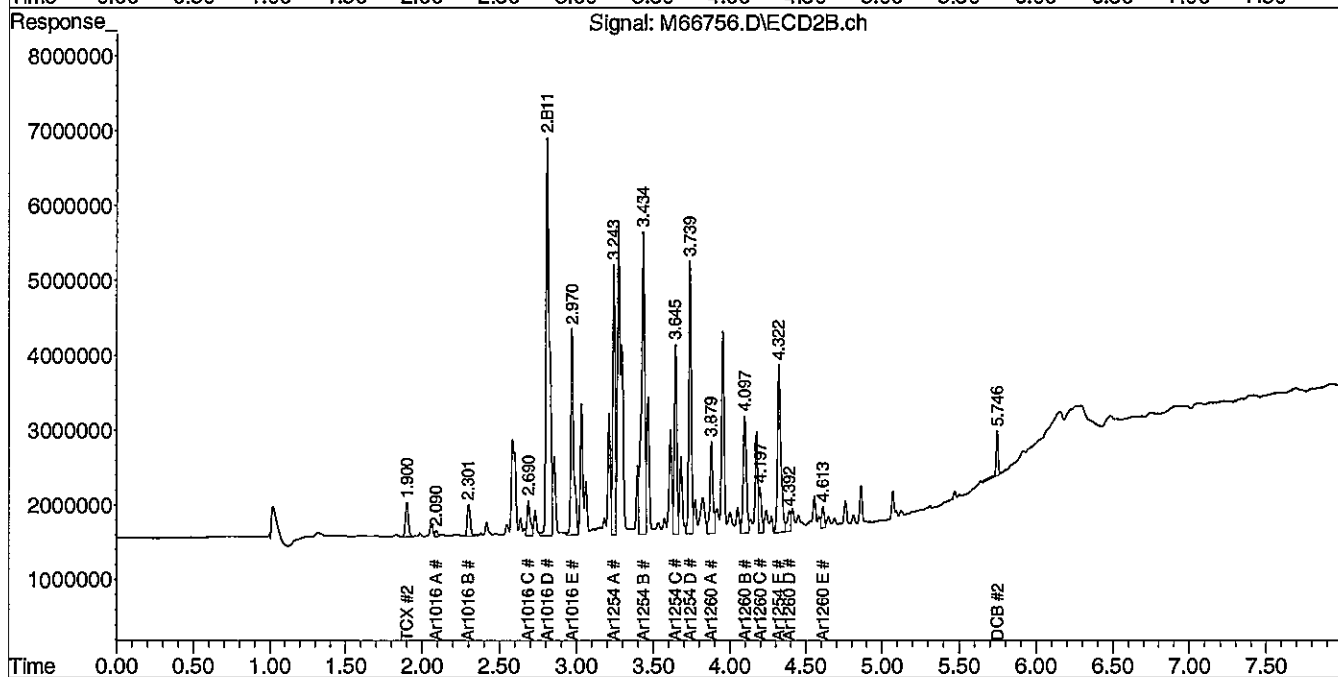
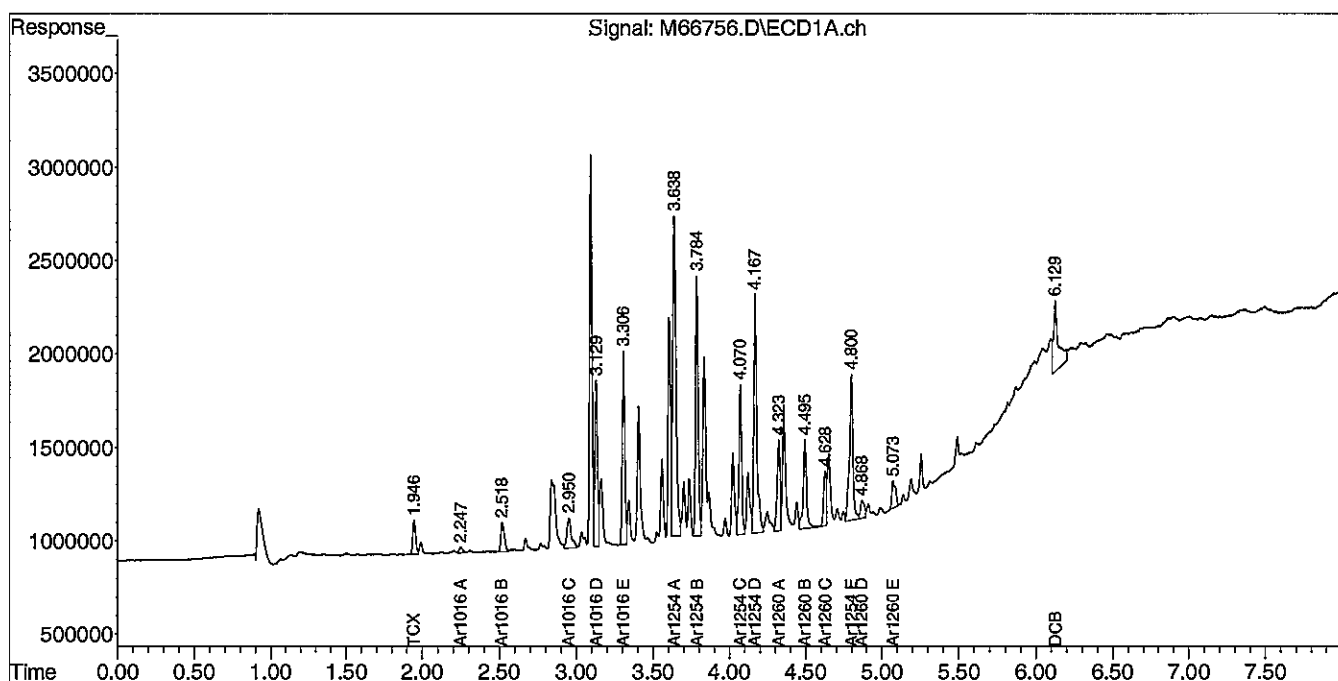
\* Values outside QC limits

Comments: \_\_\_\_\_

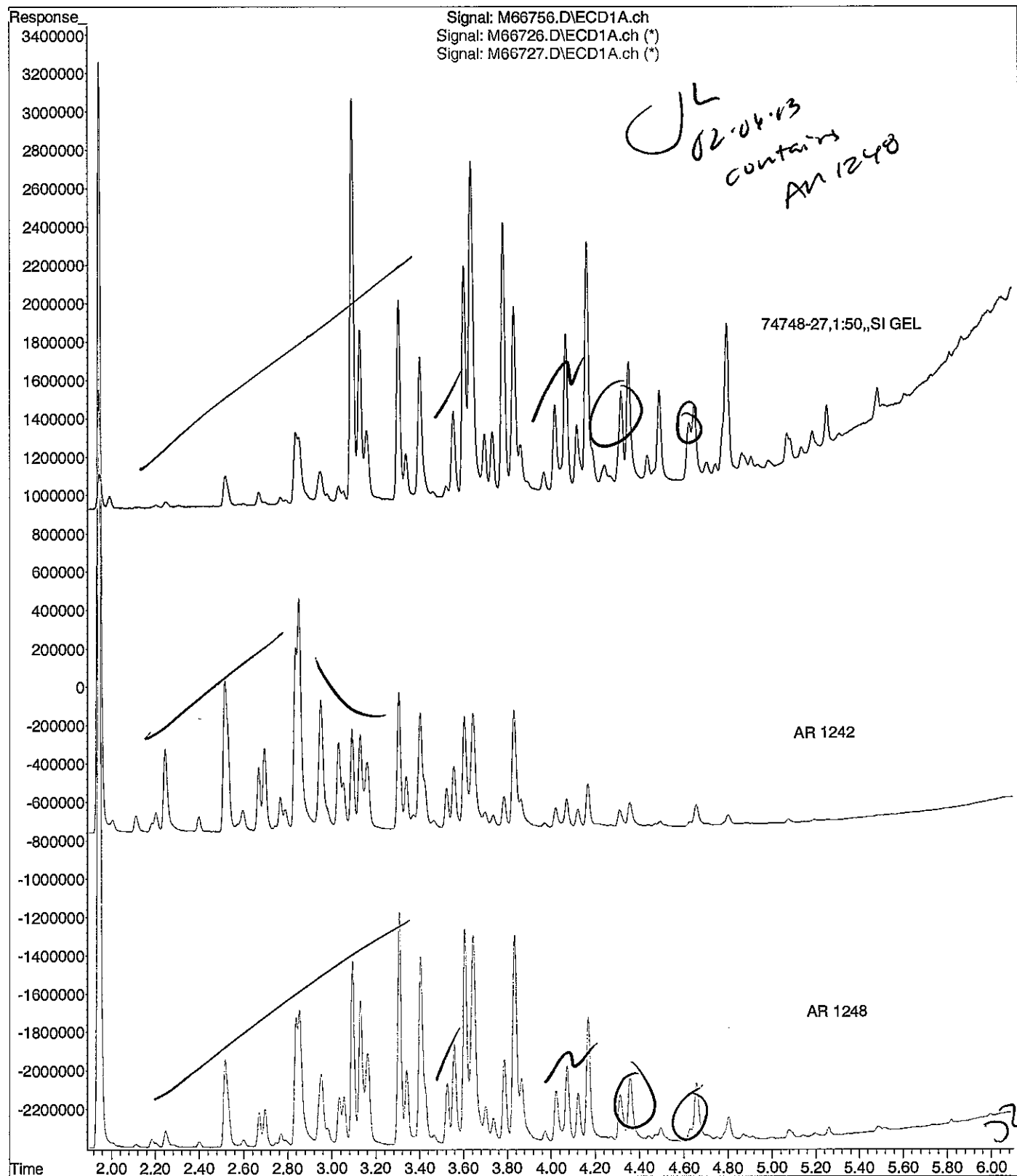
Data Path : C:\msdchem\1\DATA\020613-M\  
Data File : M66756.D  
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
Acq On : 6 Feb 2013 12:59 pm  
Operator : JK  
Sample : 74748-27,1:50,,SI GEL  
Misc : SOIL  
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: events.e  
Integration File signal 2: events2.e  
Quant Time: Feb 06 13:10:03 2013  
Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
QLast Update : Wed Feb 06 08:43:45 2013  
Response via : Initial Calibration  
Integrator: ChemStation

Volume Inj. : 2 uL  
Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020613-M\M66756.D  
Operator : JK  
Acquired : 6 Feb 2013 12:59 pm using AcqMethod PCB.M  
Instrument : Instrument M  
Sample Name: 74748-27,1:50,,SI GEL  
Misc Info : SOIL  
Vial Number: 19



Ms. Amy Wallace  
Woodard & Curran  
41 Hutchins Drive  
Portland ME 04102

February 6, 2013

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Cambridge Trust  
**Project Number:** 226334  
**Field Sample ID:** HCT-CBKD-047

**Lab Sample ID:** 74748-28  
**Matrix:** Solid  
**Percent Solid:** 100  
**Dilution Factor:** 56  
**Collection Date:** 12/05/12  
**Lab Receipt Date:** 01/29/13  
**Extraction Date:** 01/31/13  
**Analysis Date:** 02/06/13

**PCB ANALYTICAL RESULTS**

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	1850	U
PCB-1221	1850	U
PCB-1232	1850	U
PCB-1242	1850	U
PCB-1248	1850	U
PCB-1254	1850	6840
PCB-1260	1850	U
PCB-1262	1850	U
PCB-1268	1850	U
<b><u>Surrogate Standard Recovery</u></b>		
2,4,5,6-Tetrachloro-m-xylene	63	%
Decachlorobiphenyl	75	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

**METHODOLOGY:** Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082A.  
Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.  
Sample cleanup was conducted according to SW-846 Method 3630C.

**COMMENTS:** Results are expressed on a dry weight basis.

PCB  
COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M	SDG: 74748
GC Column #1: STX-CLPesticides I	Sample: 74748-28,I:5,,SI GEL
Column ID: 0.25 mm	Data File: M66757.D
GC Column #2: STX-CLPesticides II	Dilution Factor: 55.6
Column ID: 0.25 mm	

Column #1		Column #2		#
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	
PCB 1254	6845	6694	2.2	

# Column to be used to flag RPD values greater than QC limit of 40%

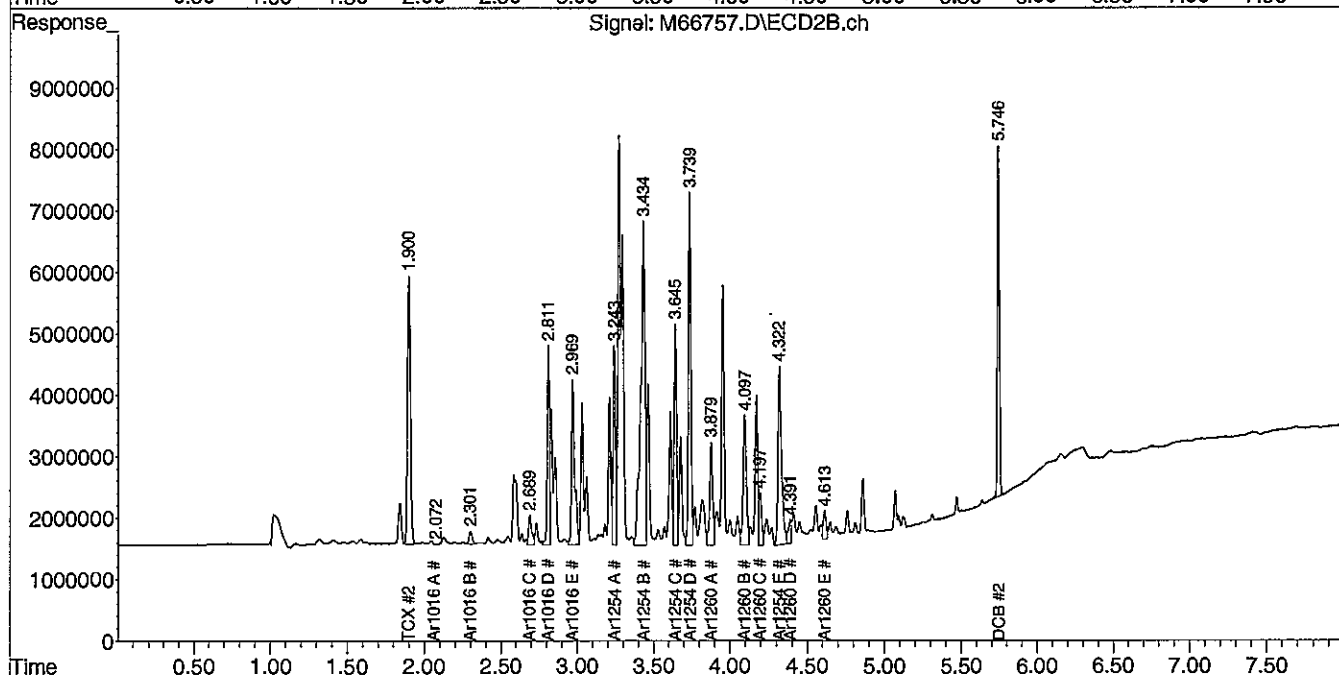
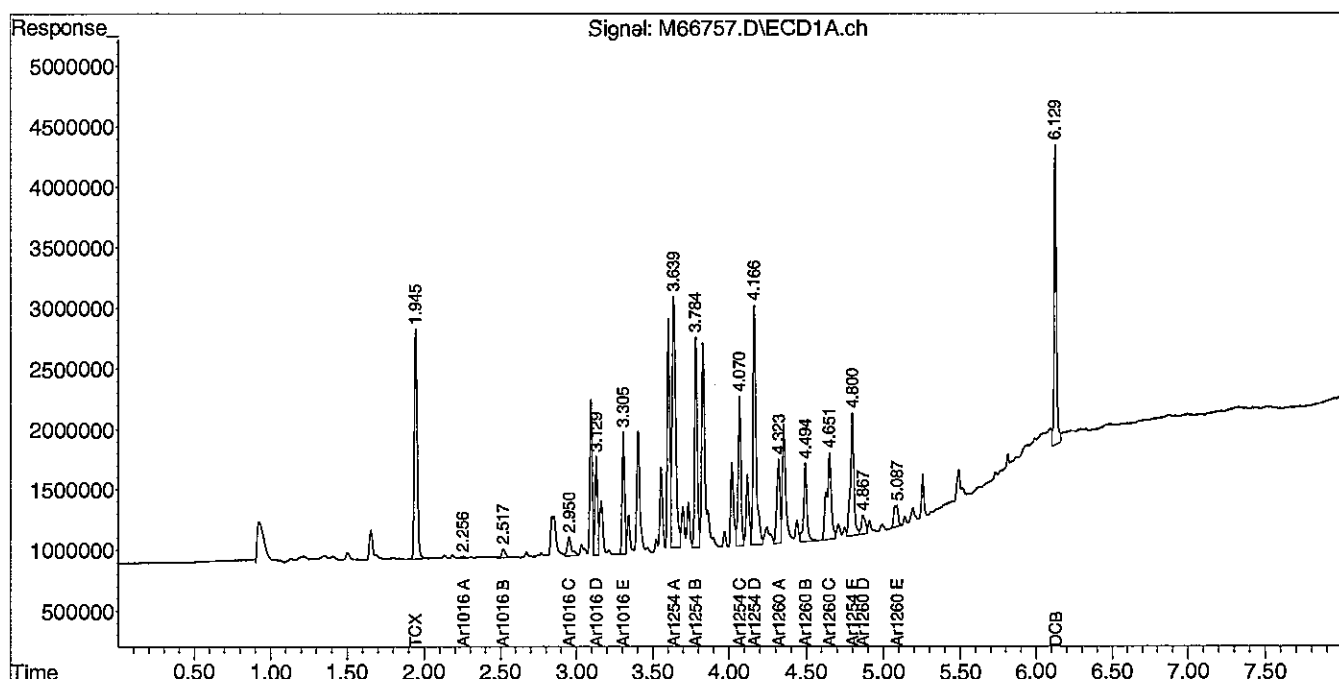
\* Values outside QC limits

Comments: \_\_\_\_\_

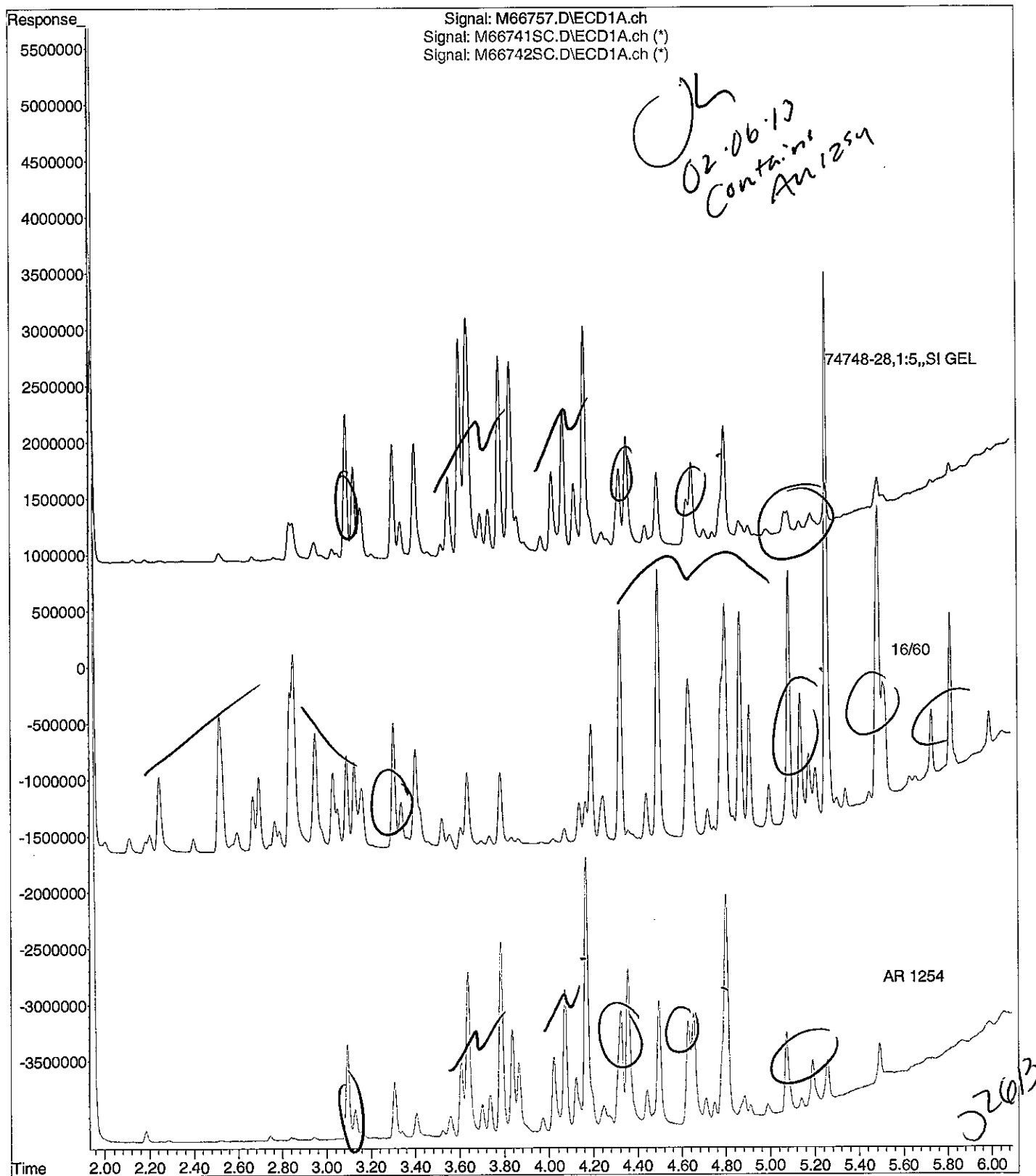
Data Path : C:\msdchem\1\DATA\020613-M\  
 Data File : M66757.D  
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch  
 Acq On : 6 Feb 2013 1:09 pm  
 Operator : JK  
 Sample : 74748-28,1:5,,SI GEL  
 Misc : SOIL  
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e  
 Integration File signal 2: events2.e  
 Quant Time: Feb 06 13:17:32 2013  
 Quant Method : C:\msdchem\1\METHODS\PCB020513.M  
 Quant Title : SW-846 METHOD 8082 Aroclor 1016/1260/1254  
 QLast Update : Wed Feb 06 08:43:45 2013  
 Response via : Initial Calibration  
 Integrator: ChemStation

Volume Inj. : 2 uL  
 Signal #1 Phase : STX-CLPPesticides Signal #2 Phase: STX-CLPPesticides  
 Signal #1 Info : 30 m x 0.25mm x 0 Signal #2 Info : 30 m x 0.25mm x 0.25 um



File :C:\msdchem\1\DATA\020613-M\M66757.D  
Operator : JK  
Acquired : 6 Feb 2013 1:09 pm using AcqMethod PCB.M  
Instrument : Instrument M  
Sample Name: 74748-28,1:5,,SI GEL  
Misc Info : SOIL  
Vial Number: 20





PCB  
QC FORMS

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: L  
GC Column #1: STX-CLPesticides I  
Column ID: 0.25 mm  
GC Column #2: STX-CLPesticides II  
Column ID: 0.25 mm

SDG: 74748

	Column #1		Column #2	
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#

74748-7,1:50,,A/C	D		D		D		D	
74748-8,1:10,,SI GEL	65		65		81		58	
74748-9,1:20,,SI GEL	D		D		D		D	
74748-10,1:5,,SI GEL	72		74		88		69	
74748-11,1:5,,SI GEL	76		76		90		70	

[illegible]

	Lower Limit	Upper Limit
SMC #1 = TCX	40	130
SMC #2 = DCB	40	130

# Column to be used to flag recovery values outside of QC limits  
\* Values outside QC limits  
D System Monitoring Compound diluted out




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JR  
1/29/13



# Chain Of Custody Form

		195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111 Fax (603) 430-2151		<b>For Analytics Use Only Rev. 4 03/28/08</b>	
Project#: <u>226334</u> Proj. Name: <u>Cambridge Trust</u>		Matrix Key: C = Concrete WP = Wipe WW = Wastewater SW = Surface Water GW = Groundwater DW = Drinking Water S = Soil/Sludge O = Oil E = Extract X = Other		<b>Samples were:</b> 1) Shipped or hand-delivered 2) Temp blank °C <u>4.7</u> 3) Received in good condition <u>Y</u> or N 4) pH checked by: <u>N/A</u> 5) Labels checked by: <u>185 1/29/13</u>	
Company: <u>Woodard + Curran</u>		Container Key P=plastic G=glass		Received By: <u>ESL</u>	
Contact: <u>Amy Wallace</u>		Preservation		Received By:	
Address: <u>41 Hutchins Drive</u> <u>Portland Maine</u>		Phone: PO# Quote #		Received By:	
Sampler (Signature): <u>[Signature]</u>		Station Identification		Time: <u>9:10</u>	
Sample Date		Sample Time		Date: <u>1/29/13</u>	
Analysis		Unpres 2° C HNO <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> HCL Me/henol Other		Matrix number/typ	
<u>HCT-CBK-028</u>		<u>11/29/12</u> <u>1855</u>		<u>PCBs</u>	
<u>HCT-CBK-036</u>		<u>1000</u>		<u>-17</u>	
<u>HCT-CBK-037</u>		<u>1005</u>		<u>-18</u>	
<u>HCT-CBK-038</u>		<u>005</u>		<u>+9</u>	
<u>HCT-CBK-039</u>		<u>1010</u>		<u>-20</u>	
<u>HCT-CBK-040</u>		<u>11/30/12</u> <u>1015</u>		<u>PCBs</u>	
Email Results to: <u>Jamuel@woodardcurran.com</u> <u>awallace@</u> <u>JLus@</u>		Comments / Instructions: <u>PCBs 8082 Soxhlet</u>		Project Requirements: Report Type <input checked="" type="checkbox"/> MCP <input checked="" type="checkbox"/> Level II <input type="checkbox"/> CTIC <input type="checkbox"/> Level III <input type="checkbox"/> DOD <input type="checkbox"/> Level IV <input type="checkbox"/> Standard	
Turnaround Request Standard <input checked="" type="checkbox"/> Priority <input type="checkbox"/> Due Date <u>5 day</u> Due Date		State: <u>NH</u> <input checked="" type="checkbox"/> MA <input type="checkbox"/> ME <input type="checkbox"/> CT <input type="checkbox"/> RI Other:		State Standard: (eg. S-1 or GW-1) EDD Required: Y* N Type:	
Lab Approval Required		*Fee may apply		Page <u>2</u> of <u>3</u>	

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Analytics\VEL Documents\VEL COC



## ANALYTICS SAMPLE RECEIPT CHECKLIST



AEL LAB#: 74748  
 CLIENT: Woodard & Curran  
 PROJECT: Cambridge Trust

COOLER NUMBER: 255  
 NUMBER OF COOLERS: 1

## A: PRELIMINARY EXAMINATION:

1. Cooler received by (initials): ES

DATE COOLER RECEIVED/OPENED: 07/29/13

2. Circle one:

Hand delivered  
(If so, skip 3)

Shipped

3. Did cooler come with a shipping slip?

Y

N

3a. Enter carrier name and airbill number here:

4. Were custody seals on the outside of cooler?

Y

N

How many & where:

Seal Date:

Seal Name:

5. Did the custody seals arrive unbroken and intact upon arrival?

Y

N

6. COC#:

7. Were Custody papers filled out properly (ink signed, legible, project information etc)?

Y

N

8. Were custody papers sealed in a plastic bag?

Y

N

9. Did you sign the COC in the appropriate place?

Y

N

10. Was enough ice used to chill the cooler?

Y N

Temp. of cooler:

4.7°C

B. Log-In: Date samples were logged in:

ES

By: 07/29/13

11. Were all bottles sealed in separate plastic bags?

Y

N

12. Did all bottles arrive unbroken and were labels in good condition?

Y

N

13. Were all bottle labels complete (ID, Date, time, etc.)

Y

N

14. Did all bottle labels agree with custody papers?

Y

N

15. Were the correct containers used for the tests indicated?

Y

N

16. Were samples received at the correct pH?

Y

N

17. Was sufficient amount of sample sent for the tests indicated?

Y

N

18. Were all samples submitted within holding time?

Y

N

19. Were all containers used within AEL's expiration date? \*\*

Y

N

20. Were VOA samples absent of greater than pea-sized bubbles?

Y

N

(Note: Pea-sized bubbles or smaller are acceptable and are not considered to adversely affect volatiles data.)

\*If NO, List Sample ID's. Lab #s:

When bubbles are present in VOA samples they are labelled from smallest (or no bubbles) to largest. Lab to analyze VOA samples with no bubbles or smallest bubbles first

20. Laboratory labeling verified by (initials):

ES

Date:

7/29/13

\*\*The expiration date is recommended by Analytics Environmental Laboratory and not the method. Therefore this does not mean that the results are non-compliant.



## ANALYTICAL REPORT

Lab Number:	L1314197
Client:	Woodard & Curran 41 Hutchins Drive Portland, ME 04102
ATTN:	Amy Martin
Phone:	(207) 774-2112
Project Name:	CAMBRIDGE TRUST
Project Number:	226334
Report Date:	08/02/13

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)





**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1314197-01	HCT-CBB-133	CAMBRIDGE	07/25/13 18:30
L1314197-02	HCT-CBC-134	CAMBRIDGE	07/25/13 18:45
L1314197-03	HCT-CBC-132	CAMBRIDGE	07/25/13 17:40
L1314197-04	HCT-CBC-130	CAMBRIDGE	07/25/13 17:15

Project Name: CAMBRIDGE TRUST

Lab Number: L1314197

Project Number: 226334

Report Date: 08/02/13

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

### Case Narrative (continued)

MCP Related Narratives

PCBs

In reference to question G:


L1314197-02 and -03: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The surrogate recoveries for L1314197-03 are below the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene (0%) and Decachlorobiphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cynthia McQueen

Title: Technical Director/Representative

Date: 08/02/13

# ORGANICS



**PCBS**

**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

**SAMPLE RESULTS**

Lab ID: L1314197-01  
 Client ID: HCT-CBB-133  
 Sample Location: CAMBRIDGE  
 Matrix: Solid  
 Analytical Method: 97,8082A  
 Analytical Date: 07/30/13 13:45  
 Analyst: JT  
 Percent Solids: 100%

Date Collected: 07/25/13 18:30  
 Date Received: 07/26/13  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 07/28/13 14:40  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 07/29/13  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 07/29/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1016	ND		ug/kg	56.5	--	1
Aroclor 1221	ND		ug/kg	56.5	--	1
Aroclor 1232	ND		ug/kg	56.5	--	1
Aroclor 1242	ND		ug/kg	56.5	--	1
Aroclor 1248	ND		ug/kg	37.7	--	1
Aroclor 1254	223		ug/kg	56.5	--	1
Aroclor 1260	ND		ug/kg	37.7	--	1
Aroclor 1262	ND		ug/kg	18.8	--	1
Aroclor 1268	ND		ug/kg	18.8	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	75		30-150
Decachlorobiphenyl	86		30-150
2,4,5,6-Tetrachloro-m-xylene	81		30-150
Decachlorobiphenyl	79		30-150



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

**SAMPLE RESULTS**

Lab ID: L1314197-02 D  
 Client ID: HCT-CBC-134  
 Sample Location: CAMBRIDGE  
 Matrix: Solid  
 Analytical Method: 97,8082A  
 Analytical Date: 07/30/13 16:10  
 Analyst: JT  
 Percent Solids: 99%

Date Collected: 07/25/13 18:45  
 Date Received: 07/26/13  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 07/28/13 14:40  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 07/29/13  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 07/29/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1016	ND		ug/kg	290	--	5
Aroclor 1221	ND		ug/kg	290	--	5
Aroclor 1232	ND		ug/kg	290	--	5
Aroclor 1242	ND		ug/kg	290	--	5
Aroclor 1248	ND		ug/kg	193	--	5
Aroclor 1254	4240		ug/kg	290	--	5
Aroclor 1260	ND		ug/kg	193	--	5
Aroclor 1262	ND		ug/kg	96.6	--	5
Aroclor 1268	ND		ug/kg	96.6	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	76		30-150
Decachlorobiphenyl	91		30-150
2,4,5,6-Tetrachloro-m-xylene	74		30-150
Decachlorobiphenyl	70		30-150



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

**SAMPLE RESULTS**

Lab ID: L1314197-03 D  
 Client ID: HCT-CBC-132  
 Sample Location: CAMBRIDGE  
 Matrix: Solid  
 Analytical Method: 97,8082A  
 Analytical Date: 07/31/13 10:25  
 Analyst: JT  
 Percent Solids: 99%

Date Collected: 07/25/13 17:40  
 Date Received: 07/26/13  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 07/28/13 14:40  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 07/29/13  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 07/29/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1016	ND		ug/kg	580	--	10
Aroclor 1221	ND		ug/kg	580	--	10
Aroclor 1232	ND		ug/kg	580	--	10
Aroclor 1242	ND		ug/kg	580	--	10
Aroclor 1248	ND		ug/kg	387	--	10
Aroclor 1254	8450		ug/kg	580	--	10
Aroclor 1260	ND		ug/kg	387	--	10
Aroclor 1262	ND		ug/kg	193	--	10
Aroclor 1268	ND		ug/kg	193	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

**Project Name:** CAMBRIDGE TRUST**Lab Number:** L1314197**Project Number:** 226334**Report Date:** 08/02/13

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8082A  
 Analytical Date: 07/30/13 14:22  
 Analyst: JT

Extraction Method: EPA 3540C  
 Extraction Date: 07/28/13 14:40  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 07/29/13  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 07/29/13

Parameter	Result	Qualifier	Units	RL	MDL
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 01-03 Batch: WG624846-1					
Aroclor 1016	ND		ug/kg	57.0	--
Aroclor 1221	ND		ug/kg	57.0	--
Aroclor 1232	ND		ug/kg	57.0	--
Aroclor 1242	ND		ug/kg	57.0	--
Aroclor 1248	ND		ug/kg	38.0	--
Aroclor 1254	ND		ug/kg	57.0	--
Aroclor 1260	ND		ug/kg	38.0	--
Aroclor 1262	ND		ug/kg	19.0	--
Aroclor 1268	ND		ug/kg	19.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	66		30-150
Decachlorobiphenyl	87		30-150
2,4,5,6-Tetrachloro-m-xylene	69		30-150
Decachlorobiphenyl	77		30-150



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CAMBRIDGE TRUST

**Project Number:** 226334

**Lab Number:** L1314197

**Report Date:** 08/02/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 01-03 Batch: WG624846-2 WG624846-3								
Aroclor 1016	86		74		40-140	15		30
Aroclor 1260	73		72		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	74		67		30-150
Decachlorobiphenyl	91		91		30-150
2,4,5,6-Tetrachloro-m-xylene	75		67		30-150
Decachlorobiphenyl	81		78		30-150

# **INORGANICS & MISCELLANEOUS**

**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

**SAMPLE RESULTS**

**Lab ID:** L1314197-01  
**Client ID:** HCT-CBB-133  
**Sample Location:** CAMBRIDGE  
**Matrix:** Solid

**Date Collected:** 07/25/13 18:30  
**Date Received:** 07/26/13  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.8		%	0.100	NA	1	-	07/30/13 01:18	30,2540G	RT



**Project Name:** CAMBRIDGE TRUST**Project Number:** 226334**Lab Number:** L1314197**Report Date:** 08/02/13**SAMPLE RESULTS****Lab ID:** L1314197-02**Client ID:** HCT-CBC-134**Sample Location:** CAMBRIDGE**Matrix:** Solid**Date Collected:** 07/25/13 18:45**Date Received:** 07/26/13**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.0		%	0.100	NA	1	-	07/30/13 01:18	30,2540G	RT



**Project Name:** CAMBRIDGE TRUST**Project Number:** 226334**Lab Number:** L1314197**Report Date:** 08/02/13**SAMPLE RESULTS****Lab ID:** L1314197-03**Client ID:** HCT-CBC-132**Sample Location:** CAMBRIDGE**Matrix:** Solid**Date Collected:** 07/25/13 17:40**Date Received:** 07/26/13**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	98.5		%	0.100	NA	1	-	07/30/13 01:18	30,2540G	RT



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Duplicate Analysis**  
**Batch Quality Control**

**Lab Number:** L1314197  
**Report Date:** 08/02/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG625159-1 QC Sample: L1314363-01 Client ID: DUP Sample						
Solids, Total	24.0	22.9	%	5		20



**Project Name:** CAMBRIDGE TRUST**Project Number:** 226334**Lab Number:** L1314197**Report Date:** 08/02/13**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Reagent H2O Preserved Vials Frozen on:** NA**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1314197-01A	Amber 120ml unpreserved	A	N/A	5.8	Y	Absent	TS(7),MCP-8082LL-10-3540C(365)
L1314197-02A	Amber 120ml unpreserved	A	N/A	5.8	Y	Absent	TS(7),MCP-8082LL-10-3540C(365)
L1314197-03A	Amber 120ml unpreserved	A	N/A	5.8	Y	Absent	TS(7),MCP-8082LL-10-3540C(365)
L1314197-04A	Amber 120ml unpreserved	A	N/A	5.8	Y	Absent	HOLD(14)

\*Values in parentheses indicate holding time in days



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.

**Report Format:** Data Usability Report



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

**Data Qualifiers**

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** CAMBRIDGE TRUST  
**Project Number:** 226334

**Lab Number:** L1314197  
**Report Date:** 08/02/13

## REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certificate/Approval Program Summary

Last revised July 2, 2013 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.  
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

*Drinking Water* (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

*Wastewater/Non-Potable Water* (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

*Solid Waste/Soil* (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270). )

### State of Illinois Certificate/Lab ID: 003155. **NELAP Accredited.**

*Drinking Water* (Inorganic Parameters: SM2120B, 2320B, 2510B, 2540C, SM4500CN-CE, 4500F-C, 4500H-B, 4500NO3-F, 5310C, EPA 200.7, 200.8, 245.1, 300.0. Organic Parameters: EPA 504.1, 524.2.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: SM2120B, 2310B, 2320B, 2340B, 2510B, 2540B, 2540C, 2540D, SM4500CL-E, 4500CN-E, 4500F-C, 4500H-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-E, 4500S-D, 4500SO3-B, 5210B, 5220D, 5310C, 5540C, EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1. Organic Parameters: EPA 608, 624, 625.)

*Hazardous and Solid Waste* (Inorganic Parameters: EPA 1010A, 1030, 1311, 1312, 6010C, 6020A, 7196A, 7470A, 7471B, 9012B, 9014, 9038, 9040C, 9045D, 9050A, 9065, 9251. Organic Parameters: 8011 (NPW only), 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8315A, 8330.)

### Maine Department of Human Services Certificate/Lab ID: 2009024.

*Drinking Water* (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2120B, 2130B, 2320B, 2510C, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, 5310C, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 8315A, 9010C, SM2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-C, 4500NH3-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-B, 4500P-E, 4500S2-D, 4500SO3-B, 5540C, 5210B, 5220D, 5310C, 9010B, 9030B, 9040C, 7470A, 7196A, 2340B, EPA 200.7, 6010C, 200.8, 6020A, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8011, 8081B, 8082A, 8330, 8151A, 8260C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

*Solid Waste/Soil (Inorganic Parameters:* 9010B, 9012A, 9014, 9040B, 9045C, 6010C, 6020A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B, 9038, 9251. *Organic Parameters:* ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260C, 8270D, 8330, 8151A, 8081B, 8082A, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035.)

**Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.**

*Drinking Water (Inorganic Parameters:* (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO<sub>3</sub>-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. *Organic Parameters:* (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. *Microbiology Parameters:* SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water (Inorganic Parameters:* (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH<sub>3</sub>-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO<sub>3</sub>-F, 353.2 for Nitrate-N, SM4500NH<sub>3</sub>-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

*Organic Parameters:* (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. *Microbiology Parameters:* (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

**New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.**

*Drinking Water (Inorganic Parameters:* SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO<sub>3</sub>-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. *Organic Parameters:* 504.1, 524.2.)

*Non-Potable Water (Inorganic Parameters:* SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH<sub>3</sub>-H, 4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S<sub>2</sub>-D, 4500SO<sub>3</sub>-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. *Organic Parameters:* SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

*Solid & Chemical Materials (Inorganic Parameters:* SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. *Organic Parameters:* SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

**New Hampshire Department of Environmental Services Certificate/Lab ID: 2064. NELAP Accredited.**

*Drinking Water (Organic Parameters:* **EPA 524.2:** Di-isopropyl ether (DIPE), Ethyl-t-butyl ether (ETBE), Tert-amyl methyl ether (TAME)).

*Non-Potable Water (Organic Parameters:* **EPA 8260C:** 1,3,5-Trichlorobenzene. **EPA 8015C(M):** TPH.)

*Solid & Chemical Materials (Organic Parameters:* **EPA 8260C:** 1,3,5-Trichlorobenzene.)

**New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.**

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO<sub>3</sub>-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. *Organic Parameters:* EPA 332, 504.1, 524.2.)

*Non-Potable Water (Inorganic Parameters:* SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B<sub>5</sub>+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH<sub>3</sub>-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO<sub>3</sub>-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. *Organic Parameters:* SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

*Solid & Chemical Materials (Inorganic Parameters:* SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D,

9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

**New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.1, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO<sub>3</sub>-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH<sub>3</sub>-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-B, 4500P-E, 2340B, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010C, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 8315A, 3005A, 3015, 9010C, 9030B. Organic Parameters: EPA 624, 8260C, 8270D, 8270D-SIM, 625, 608, 8081B, 8151A, 8330, 8082A, EPA 3510C, 5030B, 8015C, 8011.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1010A, 1030, EPA 6010C, 6020A, 7196A, 7471B, 8315A, 9012B, 9014, 9065, 9050A, 9038, 9251, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260C, 8270D, 8270D-SIM, 8015C, 8081B, 8151A, 8330, 8082A, 3540C, 3546, 3580A, 5035A-H, 5035A-L.)

**North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (*Inorganic Parameters:* SM2310B, 2320B, 4500CI-E, 4500Cn-E, 9012B, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO<sub>3</sub>-F, 353.2, 4500P-E, 4500SO<sub>4</sub>-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311, 1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)**

*Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)*

**Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO<sub>3</sub>-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1312, 3005A, 3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500CI-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>-B, 4500NO<sub>3</sub>-F, 4500S-D, 4500SO<sub>3</sub>-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH<sub>3</sub>-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

**Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NJ-DEP.***

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

**Texas Commission on Environmental Quality Certificate/Lab ID: T104704476. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>B, 4500P-E, 4500 S<sup>2-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

**Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.1, 2320B, 4500F-C, 4500NO<sub>3</sub>-F, 4500H+B, 5310C. Organic Parameters: EPA 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 351.2, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 2340B, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 3500Cr-D, 426C, 4500CI-E, 4500F-B, 4500F-C, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>-B, 4500NO<sub>3</sub>-F, 4500 SO<sub>3</sub>-B, 4500H-B, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C, 9010Cm

9030B, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, )

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9010C, 9012B, 9030B, 9014, 9038, 9040C, 9045D, 9251, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 3550B, 3580A, 3620C, 3630C, 6020A, 8260B, 8260C, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.

*Drinking Water* (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

**The following analytes are not included in our current NELAP/TNI Scope of Accreditation:**

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether. **EPA 8260B:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8260 Non-potable water matrix:** Iodomethane (methyl iodide), Methyl methacrylate. **EPA 8260 Soil matrix:** Tert-amyl methyl ether (TAME), Diisopropyl ether (DIPE), Azobenzene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine. **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, TKN in a soil matrix, NO<sub>2</sub> in a soil matrix, NO<sub>3</sub> in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

**MANSFIELD, MA**  
**TEL: 508-822-9300**  
**FAX: 508-822-3288**

## CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 7/26/13

ALPHA Job #: L1314197

### Client Information

Client: Woodard + Curran  
Address: 41 Hutchings Drive  
Portland ME  
Phone: jhamel@woodardcurran.com  
Fax: amanda@  
Email: jRussell@

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name:	Cambridge Trust
Project Location:	Cambridge
Project #:	226334
Project Manager:	Amy Martin
ALPHA Quote #:	

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 5 day Time:

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL  
☒ ADEx ☒ Add'l Deliverables

### Billing Information

<input checked="" type="checkbox"/> Same as Client info	PD #:
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## Regulatory Requirements/Report Limits

State /Fed Program	Criteria
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## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☐ Yes ☒ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## SAMPLE HANDLING

*Filtration* \_\_\_\_\_  
☐ Done  
☐ Not needed  
☐ Lab to do  
*Preservation*  
☐ Lab to do  
 (Please specify below)

TOTAL # BOTTLES	
1	1
2	2
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8	8
9	9
10	10
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100	100

[illegible]

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP *or* CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Container Type

Preservative

Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L1314421
Client:	Woodard & Curran 41 Hutchins Drive Portland, ME 04102
ATTN:	Amy Martin
Phone:	(207) 774-2112
Project Name:	CAMBRIDGE TRUST
Project Number:	Not Specified
Report Date:	08/02/13

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** Not Specified

**Lab Number:** L1314421  
**Report Date:** 08/02/13

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1314421-01	HCT-CBC-131	CAMBRIDGE, MA	07/30/13 06:15
L1314421-02	HCT-CBC-130	CAMBRIDGE, MA	07/30/13 06:00

Project Name: CAMBRIDGE TRUST

Lab Number: L1314421

Project Number: Not Specified

Report Date: 08/02/13

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** Not Specified

**Lab Number:** L1314421  
**Report Date:** 08/02/13

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

**Project Name:** CAMBRIDGE TRUST  
**Project Number:** Not Specified

**Lab Number:** L1314421  
**Report Date:** 08/02/13

### Case Narrative (continued)

MCP Related Narratives

PCBs

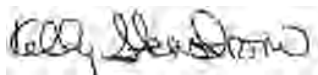
A copy of Form 10 is included as an addendum to this report.

In reference to question G:

L1314421-01: One or more of the target analytes did not achieve the requested CAM reporting limits.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 08/02/13

# ORGANICS

**PCBS**



**Project Name:** CAMBRIDGE TRUST**Lab Number:** L1314421**Project Number:** Not Specified**Report Date:** 08/02/13**SAMPLE RESULTS**

**Lab ID:** L1314421-01      D  
**Client ID:** HCT-CBC-131  
**Sample Location:** CAMBRIDGE, MA  
**Matrix:** Concrete  
**Analytical Method:** 97,8082A  
**Analytical Date:** 08/02/13 11:16  
**Analyst:** JT  
**Percent Solids:** 97%

**Date Collected:** 07/30/13 06:15  
**Date Received:** 07/30/13  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 08/01/13 11:37  
**Cleanup Method1:** EPA 3665A  
**Cleanup Date1:** 08/02/13  
**Cleanup Method2:** EPA 3660B  
**Cleanup Date2:** 08/02/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1016	ND		ug/kg	1800	--	5
Aroclor 1221	ND		ug/kg	1800	--	5
Aroclor 1232	ND		ug/kg	1800	--	5
Aroclor 1242	ND		ug/kg	1800	--	5
Aroclor 1248	ND		ug/kg	1200	--	5
Aroclor 1254	19000		ug/kg	1800	--	5
Aroclor 1260	ND		ug/kg	1200	--	5
Aroclor 1262	ND		ug/kg	601	--	5
Aroclor 1268	ND		ug/kg	601	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	74		30-150
Decachlorobiphenyl	114		30-150
2,4,5,6-Tetrachloro-m-xylene	71		30-150
Decachlorobiphenyl	101		30-150



**Project Name:** CAMBRIDGE TRUST**Lab Number:** L1314421**Project Number:** Not Specified**Report Date:** 08/02/13**SAMPLE RESULTS**

**Lab ID:** L1314421-02  
**Client ID:** HCT-CBC-130  
**Sample Location:** CAMBRIDGE, MA  
**Matrix:** Granite  
**Analytical Method:** 97,8082A  
**Analytical Date:** 07/31/13 15:25  
**Analyst:** JT  
**Percent Solids:** Results reported on an 'AS RECEIVED' basis.

**Date Collected:** 07/30/13 06:00  
**Date Received:** 07/30/13  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 07/30/13 18:45  
**Cleanup Method1:** EPA 3665A  
**Cleanup Date1:** 07/31/13  
**Cleanup Method2:** EPA 3660B  
**Cleanup Date2:** 07/31/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Polychlorinated Biphenyls - Westborough Lab						
Aroclor 1016	ND		ug/kg	57.0	--	1
Aroclor 1221	ND		ug/kg	57.0	--	1
Aroclor 1232	ND		ug/kg	57.0	--	1
Aroclor 1242	ND		ug/kg	57.0	--	1
Aroclor 1248	ND		ug/kg	38.0	--	1
Aroclor 1254	190		ug/kg	57.0	--	1
Aroclor 1260	ND		ug/kg	38.0	--	1
Aroclor 1262	ND		ug/kg	19.0	--	1
Aroclor 1268	ND		ug/kg	19.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	80		30-150
2,4,5,6-Tetrachloro-m-xylene	69		30-150
Decachlorobiphenyl	68		30-150

**Project Name:** CAMBRIDGE TRUST**Lab Number:** L1314421**Project Number:** Not Specified**Report Date:** 08/02/13

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8082A  
 Analytical Date: 07/31/13 15:38  
 Analyst: JT

Extraction Method: EPA 3540C  
 Extraction Date: 07/30/13 18:45  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 07/31/13  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 07/31/13

Parameter	Result	Qualifier	Units	RL	MDL
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 02 Batch: WG625449-1					
Aroclor 1016	ND		ug/kg	57.2	--
Aroclor 1221	ND		ug/kg	57.2	--
Aroclor 1232	ND		ug/kg	57.2	--
Aroclor 1242	ND		ug/kg	57.2	--
Aroclor 1248	ND		ug/kg	38.2	--
Aroclor 1254	ND		ug/kg	57.2	--
Aroclor 1260	ND		ug/kg	38.2	--
Aroclor 1262	ND		ug/kg	19.1	--
Aroclor 1268	ND		ug/kg	19.1	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	72		30-150
Decachlorobiphenyl	86		30-150
2,4,5,6-Tetrachloro-m-xylene	72		30-150
Decachlorobiphenyl	74		30-150



**Project Name:** CAMBRIDGE TRUST**Lab Number:** L1314421**Project Number:** Not Specified**Report Date:** 08/02/13

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8082A  
 Analytical Date: 08/02/13 08:44  
 Analyst: JT

Extraction Method: EPA 3540C  
 Extraction Date: 08/01/13 11:37  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 08/02/13  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 08/02/13

Parameter	Result	Qualifier	Units	RL	MDL
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 01 Batch: WG625916-1					
Aroclor 1016	ND		ug/kg	57.0	--
Aroclor 1221	ND		ug/kg	57.0	--
Aroclor 1232	ND		ug/kg	57.0	--
Aroclor 1242	ND		ug/kg	57.0	--
Aroclor 1248	ND		ug/kg	38.0	--
Aroclor 1254	ND		ug/kg	57.0	--
Aroclor 1260	ND		ug/kg	38.0	--
Aroclor 1262	ND		ug/kg	19.0	--
Aroclor 1268	ND		ug/kg	19.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	87		30-150
Decachlorobiphenyl	121		30-150
2,4,5,6-Tetrachloro-m-xylene	87		30-150
Decachlorobiphenyl	110		30-150

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** CAMBRIDGE TRUST

**Project Number:** Not Specified

**Lab Number:** L1314421

**Report Date:** 08/02/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 02 Batch: WG625449-2 WG625449-3								
Aroclor 1016	88		87		40-140	1		30
Aroclor 1260	86		85		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	66		65		30-150
Decachlorobiphenyl	84		81		30-150
2,4,5,6-Tetrachloro-m-xylene	67		66		30-150
Decachlorobiphenyl	70		70		30-150

MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 01 Batch: WG625916-2 WG625916-3								
Aroclor 1016	85		83		40-140	2		30
Aroclor 1260	90		92		40-140	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	83		84		30-150
Decachlorobiphenyl	115		117		30-150
2,4,5,6-Tetrachloro-m-xylene	80		80		30-150
Decachlorobiphenyl	102		130		30-150

# **INORGANICS & MISCELLANEOUS**

**Project Name:** CAMBRIDGE TRUST**Project Number:** Not Specified**Lab Number:** L1314421**Report Date:** 08/02/13**SAMPLE RESULTS**

Lab ID: L1314421-01  
Client ID: HCT-CBC-131  
Sample Location: CAMBRIDGE, MA  
Matrix: Concrete

Date Collected: 07/30/13 06:15  
Date Received: 07/30/13  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.7		%	0.100	NA	1	-	07/31/13 01:51	30,2540G	RT



**Lab Duplicate Analysis**  
Batch Quality Control**Project Name:** CAMBRIDGE TRUST**Project Number:** Not Specified**Lab Number:** L1314421**Report Date:** 08/02/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG625508-1 QC Sample: L1314421-01 Client ID: HCT-CBC-131						
Solids, Total	96.7	96.6	%	0		20



**Project Name:** CAMBRIDGE TRUST**Project Number:** Not Specified**Lab Number:** L1314421**Report Date:** 08/02/13**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Reagent H2O Preserved Vials Frozen on:** NA**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1314421-01A	Amber 120ml unpreserved	A	N/A	3.1	Y	Absent	TS(7),MCP-8082LL-10-3540C(365)
L1314421-02A	Amber 120ml unpreserved	A	N/A	3.1	Y	Absent	MCP-8082LL-10-3540C(365)

\*Values in parentheses indicate holding time in days



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** Not Specified

**Lab Number:** L1314421  
**Report Date:** 08/02/13

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.

**Report Format:** Data Usability Report



**Project Name:** CAMBRIDGE TRUST  
**Project Number:** Not Specified

**Lab Number:** L1314421  
**Report Date:** 08/02/13

**Data Qualifiers**

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** CAMBRIDGE TRUST  
**Project Number:** Not Specified

**Lab Number:** L1314421  
**Report Date:** 08/02/13

## REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certificate/Approval Program Summary

Last revised July 2, 2013 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.  
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

*Drinking Water* (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

*Wastewater/Non-Potable Water* (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

*Solid Waste/Soil* (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270). )

### State of Illinois Certificate/Lab ID: 003155. **NELAP Accredited.**

*Drinking Water* (Inorganic Parameters: SM2120B, 2320B, 2510B, 2540C, SM4500CN-CE, 4500F-C, 4500H-B, 4500NO3-F, 5310C, EPA 200.7, 200.8, 245.1, 300.0. Organic Parameters: EPA 504.1, 524.2.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: SM2120B, 2310B, 2320B, 2340B, 2510B, 2540B, 2540C, 2540D, SM4500CL-E, 4500CN-E, 4500F-C, 4500H-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-E, 4500S-D, 4500SO3-B, 5210B, 5220D, 5310C, 5540C, EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1. Organic Parameters: EPA 608, 624, 625.)

*Hazardous and Solid Waste* (Inorganic Parameters: EPA 1010A, 1030, 1311, 1312, 6010C, 6020A, 7196A, 7470A, 7471B, 9012B, 9014, 9038, 9040C, 9045D, 9050A, 9065, 9251. Organic Parameters: 8011 (NPW only), 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8315A, 8330.)

### Maine Department of Human Services Certificate/Lab ID: 2009024.

*Drinking Water* (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2120B, 2130B, 2320B, 2510C, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, 5310C, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 8315A, 9010C, SM2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-C, 4500NH3-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-B, 4500P-E, 4500S2-D, 4500SO3-B, 5540C, 5210B, 5220D, 5310C, 9010B, 9030B, 9040C, 7470A, 7196A, 2340B, EPA 200.7, 6010C, 200.8, 6020A, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8011, 8081B, 8082A, 8330, 8151A, 8260C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

*Solid Waste/Soil (Inorganic Parameters:* 9010B, 9012A, 9014, 9040B, 9045C, 6010C, 6020A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B, 9038, 9251. *Organic Parameters:* ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260C, 8270D, 8330, 8151A, 8081B, 8082A, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035.)

**Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.**

*Drinking Water (Inorganic Parameters:* (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO<sub>3</sub>-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. *Organic Parameters:* (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. *Microbiology Parameters:* SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water (Inorganic Parameters:* (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH<sub>3</sub>-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO<sub>3</sub>-F, 353.2 for Nitrate-N, SM4500NH<sub>3</sub>-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

*Organic Parameters:* (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. *Microbiology Parameters:* (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

**New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.**

*Drinking Water (Inorganic Parameters:* SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO<sub>3</sub>-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. *Organic Parameters:* 504.1, 524.2.)

*Non-Potable Water (Inorganic Parameters:* SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH<sub>3</sub>-H, 4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S2-D, 4500SO<sub>3</sub>-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. *Organic Parameters:* SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

*Solid & Chemical Materials (Inorganic Parameters:* SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. *Organic Parameters:* SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

**New Hampshire Department of Environmental Services Certificate/Lab ID: 2064. NELAP Accredited.**

*Drinking Water (Organic Parameters:* **EPA 524.2:** Di-isopropyl ether (DIPE), Ethyl-t-butyl ether (ETBE), Tert-amyl methyl ether (TAME)).

*Non-Potable Water (Organic Parameters:* **EPA 8260C:** 1,3,5-Trichlorobenzene. **EPA 8015C(M):** TPH.)

*Solid & Chemical Materials (Organic Parameters:* **EPA 8260C:** 1,3,5-Trichlorobenzene.)

**New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.**

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO<sub>3</sub>-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. *Organic Parameters:* EPA 332, 504.1, 524.2.)

*Non-Potable Water (Inorganic Parameters:* SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH<sub>3</sub>-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO<sub>3</sub>-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. *Organic Parameters:* SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Page 21 of 26 *Solid & Chemical Materials (Inorganic Parameters:* SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D,

9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

**New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.1, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO<sub>3</sub>-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH<sub>3</sub>-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-B, 4500P-E, 2340B, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010C, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 8315A, 3005A, 3015, 9010C, 9030B. Organic Parameters: EPA 624, 8260C, 8270D, 8270D-SIM, 625, 608, 8081B, 8151A, 8330, 8082A, EPA 3510C, 5030B, 8015C, 8011.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1010A, 1030, EPA 6010C, 6020A, 7196A, 7471B, 8315A, 9012B, 9014, 9065, 9050A, 9038, 9251, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260C, 8270D, 8270D-SIM, 8015C, 8081B, 8151A, 8330, 8082A, 3540C, 3546, 3580A, 5035A-H, 5035A-L.)

**North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (*Inorganic Parameters*: SM2310B, 2320B, 4500CI-E, 4500Cn-E, 9012B, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO<sub>3</sub>-F, 353.2, 4500P-E, 4500SO<sub>4</sub>-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311, 1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)**

*Drinking Water Program Certificate/Lab ID: 25700. (*Inorganic Parameters*: Chloride EPA 300.0. Organic Parameters: 524.2)*

**Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO<sub>3</sub>-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1312, 3005A, 3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500CI-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>-B, 4500NO<sub>3</sub>-F, 4500S-D, 4500SO<sub>3</sub>-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH<sub>3</sub>-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

**Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NJ-DEP.***

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

**Texas Commission on Environmental Quality Certificate/Lab ID: T104704476. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>B, 4500P-E, 4500 S<sup>2-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

**Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.1, 2320B, 4500F-C, 4500NO<sub>3</sub>-F, 4500H+B, 5310C. Organic Parameters: EPA 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 351.2, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 2340B, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 3500Cr-D, 426C, 4500CI-E, 4500F-B, 4500F-C, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>-B, 4500NO<sub>3</sub>-F, 4500 SO<sub>3</sub>-B, 4500H-B, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C, 9010Cm

9030B, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, )

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9010C, 9012B, 9030B, 9014, 9038, 9040C, 9045D, 9251, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 3550B, 3580A, 3620C, 3630C, 6020A, 8260B, 8260C, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.

*Drinking Water* (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

**The following analytes are not included in our current NELAP/TNI Scope of Accreditation:**

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether. **EPA 8260B:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8260 Non-potable water matrix:** Iodomethane (methyl iodide), Methyl methacrylate. **EPA 8260 Soil matrix:** Tert-amyl methyl ether (TAME), Diisopropyl ether (DIPE), Azobenzene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine. **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, TKN in a soil matrix, NO<sub>2</sub> in a soil matrix, NO<sub>3</sub> in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.





10B  
GC ORGANICS IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

SAMPLE NO.

HCT-CBC-131

Lab Name: Alpha Analytical Labs

SDG No.: L1314421

Lab Sample ID: L1314421-01 D

Date(s) Analyzed: 08/02/13 08/02/13

Instrument ID (1): PEST2

Instrument ID (2): PEST2

GC Column (1): CLP-Pesticides

GC Column (2): CLP-Pesticides2

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%RPD
=====	=====	=====	=====	=====	=====	=====	=====
AROCLOR 1254	1	4.23	-0.05	0.05	13600	19000	
	2	4.43	-0.05	0.05	18600		
	3	4.73	-0.05	0.05	21400		
	4	4.94	-0.05	0.05	21400		
	5	5.27	-0.05	0.05	20200		
COLUMN 1							
COLUMN 2	1	4.75	-0.05	0.05	17600	17500	8.2
	2	4.88	-0.05	0.05	14100		
	3	5.23	-0.05	0.05	20100		
	4	5.39	-0.05	0.05	18800		
	5	5.77	-0.05	0.05	17000		

At least 3 peaks are required for identification of multicomponent analytes.

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10B  
GC ORGANICS IDENTIFICATION SUMMARY  
FOR MULTICOMPONENT ANALYTES

SAMPLE NO.

HCT-CBC-130

Lab Name: Alpha Analytical Labs

SDG No.: L1314421

Lab Sample ID: L1314421-02

Date(s) Analyzed: 07/31/13 07/31/13

Instrument ID (1): PEST12

Instrument ID (2): PEST12

GC Column (1): CLP-Pesticides

GC Column (2): CLP-Pesticides2

ANALYTE	PEAK	RT	RT WINDOW		CONCENTRATION	MEAN CONCENTRATION	%RPD
=====	=====	=====	=====	=====	=====	=====	=====
AROCLOR 1254	1	4.43	-0.05	0.05	153.	190	
	2	4.63	-0.05	0.05	213.		
	3	4.93	-0.05	0.05	199.		
	4	5.13	-0.05	0.05	204.		
	5	5.46	-0.05	0.05	178.		
COLUMN 1							
COLUMN 2	1	4.92	-0.05	0.05	201.	174.	8.8
	2	5.05	-0.05	0.05	150		
	3	5.4	-0.05	0.05	187.		
	4	5.55	-0.05	0.05	182.		
	5	5.92	-0.05	0.05	152.		

At least 3 peaks are required for identification of multicomponent analytes.

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